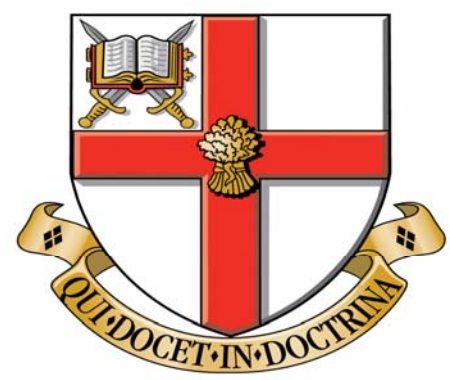

University of Chester

WHO AM I AS A TEACHER?

THE PROFESSIONAL IDENTITY OF TEACHERS & ITS IMPLICATIONS FOR THE MANAGEMENT OF THE 'EVERY CHILD MATTERS' AGENDA

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A dissertation submitted in partial fulfilment of the requirements of the University of Chester for the degree of Master of Business Administration

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"Administrator, social worker, coat finder, arbitrator, government directive reader, curriculum implementer, artistic director, form filler, language specialist, pencil sharpener, accountant, musician, fundraiser, report writer, nose wiper, public relations officer, petty cash clerk, examiner, surrogate parent, walking encyclopaedia, scapegoat … but you can just call me a teacher"

(Cath Tate cards)

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Finally, my greatest thanks should go to my partner David for his patience and support over the past year.

Abstract

Changes within national and local government following the 2003 *Every Child Matters* agenda which fashioned the 2004 Children's Act and recent 2007 Children's Plan, is requiring professionals across children's services, until now working in isolation, to work inter-professionally for the well-being of the child. As the fragmented discourse of service provision in England and Wales is replaced by an integrated, holistic approach, this will, it is suggested, have significant implications for all professionals working with children, young people and their families.

Exploring the imperative through the lens of teachers' professional identity, this research considers how its precepts might risk the agenda's management and success.

The research design takes constructivism as an epistemological stance and adopts a sequential mixed methods approach. Grounded within the literature of professional identity and inter-professional working, it works abductively with the data and draws upon the insights of the established socio-psychological theorising, approached from the theoretical constructs of social identity theory, also the paradigmatically divergent communities of practice and activity theory, to explore the interactions between teacher identity and current public service policy reform.

Conducted with a sample of teachers from Secondary Schools from within Cheshire and Wirral (N=40), this small-scale, triangulated, empirical research maps, through survey and interviews, perceptions of teacher identity and the *Every Child Matters* (*ECM*) imperative. The data collected, both quantitative and qualitative, reveals that whilst teachers perceive their identities differently, they hold considerable strength of identity, possibly a coping mechanism as they are forced into an unfamiliar socio-cultural context.

With influencing factors, especially those of gender, teaching life phase and subject taught, demonstrated to influence both perceptions of teacher identity but also their approach to the *ECM* agenda and inter-professionalism, this pragmatic aspect is of paramount practical importance for change interventionists.

As such, this research has value in elucidating how teachers perceive their professional identity and its implications for the facilitation of inter-professionalism. Such it is hoped will be of value for Leaders/Managers in supporting teachers as they implement this change.

Declaration

This work is original and has not been submitted previously for any academic purpose. All secondary sources are acknowledged.

Signed: _____

Date: 1st June 2008

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Chapter 1: Introduction

> *"The Introduction; ideally it should raise your anticipation, tell you what it is about, how it came to be written, and why you should read it"* (Allen & Allen 1994:xiii)

1.1 Introduction

This Chapter provides the background and rationale for the research from an academic, organisational and personal perspective. Citing opportunity to explore the issue of Government-instigated inter-professionalism through the lens of teachers' professional identity, it asserts the research questions and aims that subsequently guide the research; also providing a conceptual analysis of the terminologies and details of pre-suppositions and assumptions made. The Chapter concludes by outlining the structure of the research report.

1.2 Background to the research

Management research has witnessed increasing focus upon professional identity; a theoretical construct, akin to many others regularly debated in academia, that has become common-place in everyday language (Felstead et al. 2006:2). Initially focusing upon role typologies (eg. Ohlen & Segesten 1998), working-styles (eg. Haughey et al. 1996), organisational growth (eg. Ruohotie 1999, 1996a,b) and analysis of policy discourses (eg. Sachs 2001), consequential of increased cross-cultural mobility and technology's 'borderless globe', recent research has addressed facets of ethnicity (eg. Phinney 1992, 1990), gender (eg. O'Neil et al. 1993) and racial identity (eg. Helms 1995).

Whilst post-modernists (eg. Dent & Whitehead 2002) question whether, nowadays, professionals acquire an identity, 21st century requirements for collaborative cross-professional working, imposed through ever-increasing demands for accountability and enhancement of social capital (eg. Garmanikow & Green 1999), has brought this empirically-under-researched field (Volman & Ten Dam 2007) to the fore. Advanced through a theoretical ability to enable professionals to concentrate upon their own role rather than "swamped by a deluge of work" (Abbott et al. 2005), within private, public and voluntary sectors, collaborative working-practices have become the norm

(eg. Soloman et al. 2001) facilitated through such approaches as "7Cs of strategic collaboration" (Austin 2002, 2000).

Although mandatory within health for over a decade, collaborative-practice has recently encroached into education, a profession traditionally considered immune. Cited by some as further policy-transfer, originating from USA (eg. Ozga & Jones 2006), within UK Education such "joined-up government" was pioneered by the Scottish New (latterly, Integrated) Community Schools (eg. Nixon et al. 2002). Modelled through such initiatives as "Excellence in Schools" (DfEE 1999, 1998a) and "SureStart" (DfEE 1998b), within England and Wales the recent 2003 "*Every Child Matters*" agenda (DfES 2004a, 2003) and evolving Children's Plan[1] (DCSF 2007a) provides the imperative.

Within this context of collaboration and change, teachers' professional identity is greatly significant. Whilst perhaps initially considered a construct relevant only to academia and not practitioners, with teachers constructing their professional identities through accepting, resisting or transforming "emotional scripts" as they implement reform (Schmidt & Datnow 2005), ignorance of this psychological element, enabling them to determine how their professional-*selves* are "grounded, shaped and transformed" (Robinson et al. 2005:186) and to renegotiate new relationships with their work-role (eg. Paulsen 2003), risks change success (eg. Souhami 2007; Etelapelto 2006). With research within these areas currently lacking, "it is critical that researchers develop a solid understanding of … professional identity and the factors that influence its development" (Dobrow & Higgins 2005:568) if the "holy grail of the fabled inclusive-practice is to be achieved" (Daniels et al. 2004:1).

Further justification for this research is considered in Chapter 1.4

[1] This report will refer to the "*Every Child Matters*" agenda throughout, although the notions of inter-professional working are being conceptualised within the more recent Children's Plan (DCSF 2007a)

1.2.1 Public Service reform: the *Every Child Matters* agenda and its rhetoric for inter-professional working[2]

Following the Climbié enquiry (Laming 2003), the Green Paper, "*Every Child Matters*" (*ECM*) (DfES 2004a, 2003) and subsequent 2004 Children's Act, provides a legislative spine for inter-professional working across children's services in England and Wales.

Deemed to be the most significant development for children in over thirty years, focussing upon 'Five Outcomes' for well-being (Figure 1.1), against a "backcloth of high politics" (Challis et al. 1988) the agenda seeks to replace the fragmented "childcare discourse" with an integrated, holistic "pedagogic discourse" (Moss 2006) (Figure 1.2).

Be healthy	Physically healthy Mentally and emotionally healthy Sexually healthy Healthy lifestyles Choose not to take illegal drugs *Parents, carers and families promote healthy choices*
Stay safe	Safe from maltreatment, neglect, violence and sexual exploitation Safe from accidental injury and death Safe from bullying and discrimination Safe from crime and anti-social behaviour in and out of school Have security, stability and are cared for *Parents, carers and families provide safe homes and stability*
Enjoy and achieve	Ready for school Attend and enjoy school Achieve stretching national educational standards at primary school Achieve personal and social development and enjoy recreation Achieve stretching national educational standards at secondary school *Parents, carers and families support learning*
Make a positive contribution	Engage in decision-making and support the community and environment Engage in law-abiding and positive behaviour in and out of school Develop positive relationships and choose not to bully and discriminate Develop self-confidence and successfully deal with significant life changes and challenges Develop enterprising behaviour *Parents, carers and families promote positive behaviour*
Achieve economic well-being	Engage in further education, employment or training on leaving school Ready for employment Live in decent homes and sustainable communities Access to transport and material goods Live in households free from low income *Parents, carers and families are supported to be economically active*

Figure 1.1: *Every Child Matters*: the Five Outcomes
Source: DfES (2004a:9)

[2] Whilst the *Every Child Matters* agenda typically uses the term "multi-agency", other documentation (eg. DCSF 2007a) refers to inter-professional working. As such, this wider term will generally be employed within this report

Figure 1.2: *Every Child Matters*: working for the child
Source: Lapkowka (2006: 2)

Whilst the researcher remains circumspect as to whether such policy is aspiration or realism, through such measures the Government has fulfilled its election pledge of modernising public services (DETR 1999) and alleviated its suspicions of local government professionals. However, these ideals are not new: 1944 Education Act and Plowden Report (CACE 1967) stressed the humanist element and 1988 Education Act initiated teachers' additional responsibilities outside of their direct teaching/subject area (eg. Mahony & Hextall 2000); the key difference lies in the inter-professional delivery. Whilst workforce reform will ensure a "Common Core of Skills and Knowledge" (DfES 2004b), there is no agreed model for how the sector will "move in harmony" (Hawker 2005:34). Indeed themes emerging from research to date (eg. Frost et al. 2005; Easen et al. 2000) emphasise the problems of reconciliation of professional-practices and beliefs as the "professional silos" (McNair 2005) are eroded. These challenges are explored in Chapter 2.

1.2.2 What does *Every Child Matters* mean for teachers?

Although provoking considerable debate since the 19th century luminaries of Arnold and Huxley, the purpose of education[3], and thus the teacher, has little changed over the centuries. Whilst the functional-direction has transformed from social change

[3] Education derives from the Latin *e-ducare* meaning to 'lead out'

towards maximising individual opportunity and productivity (Tomlinson 2005), the central tenet remains knowledge[4] and skills acquisition (Bartlett et al. 2001:213); the teacher a learning facilitator, coach and mentor (Hall 2004). However, assumptions about education's delivery are being challenged (Broadfoot & Osborn 1988). Teachers, becoming the scapegoat for society's ills (eg. Ball 1990), are facing increased control; their teaching governed by "language of indicators" (Strathern 2000:314) and demands for professional accountability (eg. Elliott 2004; Esteve 2000).

With Education taking centre-stage (Robinson et al. 2005:175) in *ECM*, the greatest changes within schools for decades are being engendered, involving, directly or indirectly, every teacher, trainee, paraprofessional and educational support-service (Reid 2005) (Table 1.1).

Old Role **Pre-Every Child Matters**	**New Role** **For the 21st century**
Within-child focus Deficit & medical model Child's difficulties are the main problem	Holistic whole-child approach *Every Child Matters* focus on the five outcomes for children's well-being
Withdrawal, segregated individual pupil & small-group direct teaching for those with more complex & challenging additional educational needs	In-class inclusive approach to meet a diversity of pupils with additional educational needs Quality First Teaching *Removing barriers to achievement*
Seeks specialist diagnostic assessment	Pupil-friendly Assessment for Learning – (eg. P-scales, PIVATS, EAL & EBD) Pupil self-review of progress
Specific individual; pupil programmes with links or no transference across the curriculum	Personalised learning approaches, personalised learning & career pathways & personalised services providing "wrap around"

Table 1.1: Reconfiguration & re-conceptualisation of the traditional role of classroom teachers
Source: Cheminias (2006:4)

Furthermore, in addition to traditional 'schooling', by 2010 all schools will be expected to offer an array of extended services (DCSF 2007b), developed in partnership, available to pupils and the wider community.

[4] The meaning of Knowledge is in itself a topic of much debate; see for example Choo & Bontis (2002)

Whilst it cannot be doubted that as society changes so must education (eg. Fullan 1993a), the rate and frequency has gained pace and the record of success limited, typically failing to address the root of the problem (eg. Sikes 1996). As such, through these radical changes in working-practices, many practitioners and academics have considerable concerns for teachers and teacher identity as their role as knowledge and skills providers is weakened as they assume other roles "carry[ing] out dictates ... decided by 'experts' far removed from the everyday realities of classroom life" (Giroux 2004:205-6).

1.3 Research question and aims

Although the body of literature is growing, there is currently little understanding of how teacher identity interacts with the rhetoric of reform (eg. Lasky 2005). This research provides an opportunity to explore and develop an insight into this policy-practice interface; to explore what is perhaps the most radical change in public service delivery in England and Wales, in which teachers are both the subject and agent of change. Contextualised within Cheshire and Wirral, it seeks to consider this reform from a psycho-sociological theoretical approach, through the lens of teachers' professional[5] identity.

Drawing primarily upon two bodies of literature: the constructs of 'inter-professional working' and 'professional identity' to both secure deeper understanding and frame the research methods and data interpretation, the research further considers the relevance of the theoretical frameworks of "Communities of Practice" (CoPs) (Brown & Duguid 1991; Lave & Wenger 1991) and "Activity Theory" (AT) (Engestrom 2001, 1999) to explore how professional groups, through participation and interaction, advance reification: the "congealment" (Wenger 1988) of practices, rules and knowledge into tools/artefacts and thus effect inter-professional working.

1.3.1 The research question and aims

With Wellington (2000) citing the requirement for research to have an issue upon which to formulate a research question, the purpose of this research is to explore teacher identity and its implications for *ECM*'s inter-professionalism rhetoric.

[5] The notion of teachers being professionals is explored in Chapter 1.4

As such, the following research questions are devised:

1. How do teachers perceive their professional identity to be represented?
2. What are the implications of this professional identity for the inter-professionalism imperative of the *Every Child Matters* agenda?

To operationalise these, the following research aims are engendered:

1. To understand contemporary literature on professional identity
2. To understand how teachers perceive their professional identity is represented
3. To gain an understanding of the implications of this professional identity for the inter-professionalism imperative

The findings will, it is hoped, contribute to the growing body of knowledge on how teachers conceptualise their professional identity whilst furthering understanding of how its precepts may hinder or promote *ECM*'s assimilation, thus aiding informing Leaders/Managers how best to support teachers through this change period.

1.4 Justification for the research

Despite an ever-growing body of literature considering the rhetoric's implications for professionals, teachers are typically "missing from the picture" (Abbot et al. 2005:162). Additionally much of this research has concentrated upon the impact on professionals' development, workload and relationships rather than their professional identity.

Whilst identity is considered a 'gestalt' (eg. Korthagen et al. 2001) and thus this research considered perhaps relevant only within academia and not to the practitioner, its importance has credence through identity knowledge being invaluable in helping teachers deal with change (Phelan 2001); additionally through the identified link with classroom effectiveness (Day et al. 2006a,b).

With a perceived gap in academic research (Beijaard et al. 2004) the researcher's interest lies in establishing how teachers conceptualise their professional identity. Whilst not intended to create a list of typologies, it is hoped this will have value in

elucidating terminological vagaries, thus contributing to broadening academic understanding.

Thus realised, the researcher seeks to explore how, as highly critical of this current policy (Day et al. 2007a), teacher identity risks the inter-professionalism imperative. Such, it is hoped, will complement existing understanding of how joined-up working-practices are best implemented, ensuring positive outcomes for both users and professionals.

Motivation for this research derives from the researcher being a qualified secondary teacher, currently working within a teacher-training environment. This has equipped her with both 'insider' understanding of the limited emotional support provided to teachers, the limited 'ground level' communication vital to understanding the forces for and resisting change (Strebel 1997); also an empathy with a profession perceived as intransient and unwilling to mutely accept change (Newton 2002:207). These pre-suppositions are divulged at the onset for risk of their influencing the research findings.

1.5 Research Methodology and Design

Grounded within the academic literature (see Chapter 2), the research assumes an integrated paradigm, from a social-constructivist perspective, to explore perceptions of teacher identity. A combined abductive research approach (Peirce 1955, in Levin-Rozalis 2004) enables determination of findings both analogous and divergent to the theory.

A sequential mixed-methods approach, comprising both survey and case-study strategies, determines the views and perceptions of teachers' identity representation and the *ECM* imperative, from within Cheshire and Wirral (see Chapter 3.4). Such combined approach enables triangulation of data sources, ensuring concurrent validity (see Chapter 3.6) whilst additionally enabling the acquisition of multi-faceted, rich empirical descriptions and reducing the problem of method-boundedness.

A detailed account of the research methodology and design is found in Chapter 3.

1.6 Conceptual analysis of terms

Implicit to ensuring mutual understanding of the constructs presented requires consideration of the key terminologies perceptible within the research paradigm.

1.6.1 Professional identity

Considerable sociological debate exists as to what being 'a professional' actually means (eg. Nerland & Jensen 2007:339; Stronach et al. 2002), especially within the modern workplace where development of a new innovative and autonomous *self* ("insourcing") is complicated by bureaucratic "outsourcing" (Lash 2003) which threatens undermining CoPs. However, this research is not concerned with this larger debate, asserting the belief that a professional has undertaken "rigorous training involving specialised knowledge as decided by the profession … has been approved by the profession … with the right to exercise autonomous professional judgement … [and] undertakes regular professional updates" (Hooley 2005:3). Assimilating many of the ideals of Giddens' (1984) "structuration", [through immersion in practice, professionals share beliefs, meanings and understanding] and Beck (1997)'s "reflexivity", such definition has conceptualised the phenomenon of the "Collective Individual" (Clandinin et al. 1996); 'The Teacher' and 'The Nurse' (Nieburg & Golman 1988) "erect[ing] informal defences at their occupational boundaries: … doctors use Latin, academics … unnecessary jargon" (Reeves & Knell 2006:213).

Furthermore, some argue that teachers are not professionals, merely "technicians" (Apple 1987), teaching an 'art' or 'craft' (eg. Stronach et al. 2002). However, through holding an "identity category" (Nixon et al. 1997) and cognisant of the structural-functionalist argument that technological advances have enabled any occupational group to be deemed a profession (eg. MacDonald & Ritzer 1988), this research contends that teaching is a profession, thus teachers develop a *professional* identity[6].

Whilst some assert resolutely that professional identity is an "invention of modernity" (Bauman 1996; see also Stronach et al. 2002), the concept has afforded many

[6] Thus stated, within this report teachers' professional identity will be referred to as "teacher identity", thus appeasing the detractors

definitions consequential both of the diverse approaches to its study (Beijaard et al. 2004:108) (see Chapter 2) and through failure by many to substantiate its use, considering more professionals' *roles*. Making the distinction, the researcher suggests *role*, the expectations of an individual's profession "defined by norms structured by the institutions and organisations of society" (Castells 1997:6), is simplistic and mechanistic. In contrast, *identity*, the shared beliefs and attributes that enable differentiation between groups (eg. Tajfel & Turner 2001), refers to the way in which individuals negotiate their own subjectivity through self-reflection and emotion (Zembylas 2003:223). Possibly consequential of an individual's role, identity "uses building materials from history, geography, biology, … collective memory, … power apparatuses and religion" (Castells 1997:6) and comprises an important part of any CoP (Brown et al. 2007; Schwier et al. 2004).

The means through which teacher identity is formed and represented are explored in Chapter 2.3.

1.6.2 Inter-professional working

Despite the considerable drive for inter-professionalism, one of the many factors impeding such practices is the ambiguity in terminologies used (Hallett & Birchall 1992), often synonymously, especially by governmental organisations to describe the occasions where members of different professions work together (O'Halloran et al. 2006). Indeed determining a clear terminology around this construct is perhaps worthy of research in itself. Since this terminological quagmire is important to establishing the conceptual framework for the research, this debate is explored further in Chapter 2.2. However the definition of "enabling and encouraging professionals to work together to adopt common processes to deliver frontline services, co-ordinated and built around the needs of children and young people" (DfES 2007c), shall be adopted. The broad idiom 'inter-professional' will be used, although other terminologies may be used interchangeably as/where required.

1.6.3 Communities of Practice

In exploring the theoretical underpinnings to the research, reference is made to the construct of CoP. Conceptualised by Lave & Wenger (1991) this was developed by

Brown & Duguid (1991) who suggest that, through the socially-unified "friction" of competing ideas beheld by different 'communities', "sparks" (*ibid*:55) of innovation result, with consequential collaborative organisational-learning. Within such milieu, a CoP may be defined as a group of people who are mutually bound by what they do together (Wenger 1998:2). Created through situated interactions and co-participation, characterised by shared practices, identity and artefacts of knowledge (eg. Engestrom et al. 1999a), they are "noncanonical … fluid … often crossing the restrictive boundaries of an organisation" (Brown & Duguid 1991:50). "Closer to husbandry than architecture" (McDermott 1999), they emerge not consequential of management imperative, but informally through shared expertise and a desire to work together (Wenger & Snyder 2000). The importance of these CoPs to (teacher) identity formation is their role in the socialisation process.

1.7 Overview of the Research Report

Whilst research is typically 'untidy' (Robson 2003), structured to secure coherence this report traces the evolution of the research from its inception, through the theoretical underpinnings, methodological approach and research strategy, to data collection and analysis, interpretation and linkages with the theory; finally to an evaluation of its worth. This section provides a descriptive overview of the report Chapter contents.

Contextualising the research subject, teacher identity, within recent educational reform, the *ECM* agenda, **Chapter 1** considers the relevance of interactions between teacher identity & the inherent inter-professionalism imperative. Reflecting upon the rationale and motivation for undertaking the research, formulation of the research proposal, its aims and objectives, is realised, with the key terms defined to ensure clarity and mutual understanding.

The conceptual framework, the theoretical foundations upon which the research is based, is established through **Chapter 2**. Comprising a review of the academic literature this secures greater understanding of teacher identity and inter-professionalism; additionally the theoretical underpinnings influencing the research. Arguing the importance, within teaching, of socially-defined inter-group identity and consequential inter-group discrimination which may threaten the inter-

professionalism imperative, reference is also made to the paradigmatically divergent constructs of 'CoPs' and 'Activity Theory' to provide a broader lens for understanding. A resultant conceptual model, indicating how teacher identity is represented and its interactions with the inter-professional imperative, frames the research aims whilst additionally acting as a catalyst for informing the survey methods outlined in **Chapter 3**.

Following consideration of the research philosophy and principles, the methodological approaches adopted to explore and fulfil the research question are critically explored and the rationale for such approach indicated. Detailing the mixed-methods research, consideration is made of the validity and reliability, citing measures undertaken to reduce error. Additionally ethical implications are acknowledged. Finally the methods of data analysis are documented.

A subsequent detailed, descriptive account of the findings obtained through the primary research is presented within **Chapter 4**. This illustrates the patterns and trends observable in the data collected to determine perceptions of teacher identity representation and of *ECM*'s inter-professionalism, whilst additionally triangulating the findings to assure research validity.

Following a critical review of the methodology and methods adopted, the focus of **Chapter 5** shifts to explain and interpret the findings, contextualising them within the framework of previous academic research and theory. Observing that, akin to previous research, teacher identity is perceived represented in different ways, the importance of influencing factors upon this representation, strength of teacher identity and perceptions of inter-professionalism are acknowledged. Drawing the research together, conclusions are made as to the limitations of the research, additionally its implications for furthering understanding within this research field.

1.8 Summary

This chapter provides the background to the research, outlining the broad field of study before introducing the research problem and questions. Consideration is made of the academic and organisational contexts, justifying the research from both theoretical and practical stances.

Clarification of the concepts and terminologies are considered as a means of orientating and contextualising the study; additionally justifications for the terminologies adopted are offered.

A brief overview of the methodology is presented and a synopsis of the report's structure.

Chapter 2: Review of the Literature

"*There are many trails up the mountain, but in time they all reach the top*" (Anya Seton, Novelist 1904-1990)

2.1 Introduction

Chapter 1 provided an overview of the research, a guide to its methodologies and structure. Detailing the purposes and intentions of *ECM*, it alludes to the terminological quagmire with which it is associated and considers how and what implications teacher identity might have for this government rhetoric.

Some (eg. Strauss 1978) deem a literature review inappropriate to pure exploratory research, suggesting pre-knowledge threatens researcher objectivity and risks overlooking important relationships. However, with this research typically abductive (Peirce 1955, in Levin-Rozalis 2004), theoretical understanding is essential to provide "theoretical sensitivity" in the data collection (Strauss & Corbin 1990; see also Cohen et al. 2007).

In establishing the research foundations, deliberation was made of the abundant frameworks available to facilitate greater understanding of the diverse, copious literatures attributable to this area of study. The purpose of this Chapter is thus to explore the conceptual frameworks that influence the research and to consider a vocabulary for it. With no single paradigm being sufficient, the approach is pluralistic and eclectic.

The review initially focuses upon two primary bodies of literature: *ECM*'s imperative of 'inter-professionalism' and the complexities of divisions of labour; additionally the construct of 'professional identity'. Consideration is made of the debate surrounding these key paradigms.

Focus then shifts to consider the wider framework within which these constructs are placed to act as a heuristic for steering the research design and analysis. Whilst the literature presents multitudinous theories to underpin research in both identity and inter-professionalism [eg. change theory, psychodynamics, complexity theory (eg. Morrison 2002)], this research focuses upon the frameworks of social identity theory (SIT) and the paradigmatically divergent CoPs (Brown & Duguid 1991; Lave &

Wenger 1991) and "Activity Theory" (AT) (Engestrom 2004, 2001, 1999) to provide a mechanism for considering how, through inter-professional participation and interaction with its inevitable conflict, (Engestrom 2004, 2001, 1999) "expansive learning" will advance reification[7] and the development of new CoPs with shared explicit knowledge and a new common language, aiding effective inter-professionalism.

2.2 The *Every Child Matters* agenda and inter-professional working

As conceptualised in Chapter 1, social policy in England and Wales (eg. DfES 2004a; 2003) requires Local Authorities to adopt the model of integrated Children's Services imposing, through 'workforce remodelling', a 'new professionalism' upon all involved with children and young people.

Whilst in theory this panacea, to protect vulnerable children and initiate professionals' pro-activity, is deemed utopian, it is, currently, far from the reality (Atkinson et al. 2005; Frost 2005). Attributable, in part, to a lack of clarity in its terminologies and requirements, operational problems are also well-documented (see Chapter 2.2.2).

2.2.1 Inter-professional working-practices: a terminological quagmire?

The literature on inter-professional working-practices, whilst diffuse (Frost 2005:7), is under-developed (Warmington et al. 2004), complicated by there being no one model of integrated service-provision (eg. Frost 2005; Atkinson et al. 2001). Government documentation, whilst stipulating the adoption of inter-professional working, does not detail how this might be achieved; even its website (www.ecm.gov.uk) provides differing guidance for both "integrated working" and three models for "multi-agency working". It is this gap between policy intentions and the "bricolage" of everyday delivery (Ciborra 2002:47), developed consequential of the "complex web in which [the] policy is located" (Milbourne 2005:678), that is enhancing many of the problems and insecurities surrounding its implementation.

The ambiguity of terminologies used, often synonymously, to describe different professions working or learning together (O'Halloran et al. 2006) provides a further

[7] For definition of reification see Chapter 1.3

challenge: “all these words [multi-disciplinary, inter-disciplinary, inter-professional, multi-agency] have come to mean something and nothing” (Pirrie et al. 1998). Even policy documentation (DfES 2003) employs a plethora of different terms: citing the development of “universal services” (p.5) and “integration … through multi-disciplinary teams” (p.51). Whilst attempts have been initiated to instil clarity, they are complicated by disparate approaches from conceptual, numerical, territorial and epistemological stances (eg. Braithwaite & Travaglia 2005). Thus there is “no consistent or coherent idea of what constitutes [multi-professional working] nor any comprehensive models … [to] aid its successful undertaking” (Easen et al. 2000:364). Indeed recent audits undertaken (Frost 2005; Atkinson et al. 2002, 2001) indicate considerable geographical variations in initiative and practice.

2.2.2 The implications of inter-professional working-practices for professional groups

Advocates extol the virtues of inter-professionalism, citing professionals’ widening expertise, knowledge (Abbot et al. 2005) and the benefits for children and families (Anning et al. 2006). However a burgeoning encumbrance of literature extols the challenges and complexities of collaborative ventures. It is not the “muddy terminological quagmire” (Scottish Executive 2006; Lloyd et al. 2001) alone that causes concern; literature exemplifies the implications of such practices upon professional groups (eg. Atkinson et al. 2005, 2001). Whilst some, consequential of problems created through attempts to put it into practice (Davie 1993a,b), perceive it to be *yet another* part of the “manic-depressive cycle of the policy debate … with fits of enthusiasm yielding to bursts of disillusion” (Challis et al. 1988:267), others accentuate the inhibitors and implications for service-users. Although securing some success, the Integrated Community Schools have been plagued by problems (eg. Tett 2005; Sammons et al. 2003), a situation corroborated through scant evidence of success from within health-care research (eg. Peck et al. 2002).

Focussing upon the operational delivery Atkinson et al. (2002) summarise the plethora of key challenges (Table 2.1).

	Challenges presented by inter-professional working	Key research
Structural	Differences in agency structures & boundaries	Scriven 1995
	Conflicting workloads	Harker et al. 2004
	Conflicting aims, objectives & expectations	Easen 1998; Bloxham 1996
	Ethical issues: confidentiality & information-sharing protocols; leading to withholding of information & conflicts between the professionals	Farmakopoulou 2002; Webb & Vulliamy 2001
	Lack of cross-agenda planning & communication at management level such that practitioners, have "little choice in being 'translated' into multi-agency groups ….. [&] have been offered limited training to work in new ways" (Anning 2001)	Dyson et al. 1998; Bloxham 1996
Resource	Fiscal issues: financial uncertainties & differing pay scales	Tidsell et al. 2005; Cameron & Lart 2003; Johnson et al. 2003; Sammons et al. 2003; Wilkin et al. 2003; Van Eyk & Baum 2002
	Staffing arrangements & time investment	Normington & Kyriacou 1994
	Differing working conditions	
	Increased workloads & pressure	Atkinson et al. 2001
Socio-psychological	Lack of shared understanding & lack of internal cohesion	Dyson et al. 1998
	"Clashing song sheets" & differing models of belief & practice	Webb & Vulliamy 2001; Frost et al. 2005; Milbourne et al. 2003; Birchall & Hallett 1995
	Loss of professionals' identity as the traditional boundaries of their professions are eroded	Anning et al 2006
	Harbouring a narrow view that *they* are the experts, thus providing minimal co-operation & communication with other professional groups	Freeman et al. 2002
	Territorialism & "tribalism" due to professions' differentiated values & attitudes	Miller et al. 2001; Headrick et al. 1998
	Psychoanalytical needs attributable to the complex socio-psycho-political dimensions or organisational & cultural change	Applebaum et al. 2000
Cultural	Cultural differences: local government typically appointing 'integration managers' who do not facilitate breaking down the barriers but solely arbitrate	Coxon 2005; Coles et al. 2004; Wasoff et al. 2004; Cameron & Lart 2003; Van Eyk & Baum 2002

Table 2.1: Key challenges to inter-professionalism
Source: Excerpted from Atkinson et al. (2002)

Fundamental to inter-professional working is power-sharing and non-hierarchical structures (eg. Stapleton 1998; Henneman et al. 1995). However, with struggles for power entrenched within professional tradition (Barrett & Keeping 2005) and the complexities of divisions of labour (eg. Perkin 1989), professions defined by their distinctiveness rather than their similarities (eg. Loxley 1997; Pietroni 1994), research

indicates this is seldom reality; sub-groups using the opportunity to extend their power-base (eg. Kesby 2002). Reinforced by sociological definitions of professionalism (Frost 2005:11) and exemplified through "realistic conflict theory" resistance (eg. Spears et al. 1997), this is enhanced through current professional training encouraging "cognitive exclusivity" (McDonald 1995), professional arrogance and stereotyping (eg. Hean et al. 2006; Mandy et al. 2004; Hind et al. 2003).

Thus, whilst perceived by some as "authoritarian and anti-professional" (Powell & Pickard 2005:417), as policy seeks to surmount professional delineations, erode professional silos (McNair 2005; Locke 2001) and blur roles (Brown et al. 2000), the professionals fear for their role security (Booth & Hewison 2002; Hornby & Atkins 2000) and professional identity, fearing they will become 'hybridised' professionals: simply a '*Jack of all trades*' or vague '*Children's worker*' (Anning et al. 2006).

Despite assurance to the contrary (eg. UCET 2007), this threat to professional identity, perceived by many (eg. Moran et al. 2006; Oliver 2005; Robinson et al. 2005) as presenting the greatest challenge to teachers, forms the focus of this research. Through its imperative, the numerous yet competing discourses are "shift[ing them] from the well-established landscape of education to develop further as social agents" (Powell & Pickard 2005:418), a shift undoubtedly impacting upon their pedagogical practices.

Before further reflection can be made of this perceived threat to teacher identity, it is necessary to consider its conceptual construct.

2.3 The construct of professional identity

> *Professional identity acts as an "identifier of a shared ethic ... [far] older than the identifiers of qualifications … those entering … were expected to declare publicly their skill and their character for the job"* (Reeves & Knell 2006:213)

Whilst philosophers, sociologists and psychologists have long debated the notion of "who am I?" (eg. Mead 1934; Erikson 1959), recent emphasis has been upon how social categorisation of society affects individuals' emotions, behaviour and actions, especially within organisational settings (eg. FAME 2007; Terry et al. 2001; Barreto

& Ellemers 2000). Whilst "becom[ing] one of the unifying frameworks of intellectual debate" (Jenkins 1996:7), professional identity is highly contested, none-so-much as within teaching (Beijaard et al. 2004:108). Although such vagueness in its definition is attributable in part to the multi-disciplinary approaches, this is intensified through failure to substantiate its use as an analytical construct.

2.3.1 Changing conceptualisations of identity and professional identity

The literature emphasises the importance of the academic disciplines of sociology (eg. Zaretsky 1994) and psychology (eg. Hall & DuGuay 1996) in the study of identity. Whilst criticised for their simplicity, many contemporary theories are grounded within them.

Teacher identity implies both sociological and cognitive psychological (psycho-social) perspectives (eg. Beijaard et al. 2004). Thus, whilst not purporting to be theoretically comprehensive, the conceptual framework is developed about these two discernable approaches. Whilst the contribution of essentialist (agenetic) and constructivist stances is acknowledged, it is suggested that, with encroaching managerialism, the former plays an increasingly lesser role (eg. Nerland & Jensen 2007).

Traditional conceptions of identity, "like the kernel of a nut" (Currie 1998:2) suggest that individuals create distinct *selves* which, personally indistinguishable, are singular, unified, little affected by context or biography and stable over time. However, this inherently simplistic, essentialist stance, whilst still favoured by some (eg. Gardner 1995) is rejected by cultural theorists (eg. Hall 1998; Jenkins 1996) who accepting Vygotskian and Piaget's ideologies, cite the importance of societal interactions, being inexorably relational; identity varies within different social situations (Mead 1934). Such hypothesising corroborates work explored in parallel within psychology (eg. Erickson 1968, 1959). Whilst questionable in terms of its conceptualisation of the *ego*, this signals the importance of identity instability, it being re-created during "crisis" stages in life. In concurrence with this, Goffman (1959) emphasises the notion of multiple *selves*: a self-image and a role *acted* within a specific situation; a belief substantiated by Ball (1972)'s "situated" and "substantive" identities.

Taking this philosophy into professionalism, many hypothesise that professional identity is a "subjective self-conceptualisation" (McGowan & Hart 1990) developed through group interactions within work roles; individuals expressing their professional identity in terms of 'who they are' and 'want to be'. Furthermore, Ibarra (1999) suggests that professionals may develop trial "provisional selves" before developing their professional identities more fully. Akin to this, developing upon Ball (1972), researchers (eg. Scott 1999; Scott et al. 1999; Reynolds & Pope 1991) postulate that an individual is capable of adopting multiple identities: a "plurality of roles" (Sachs 2003, 2001), adopting the most appropriate to the prevailing social-environment. The importance of these social influences, confirming the researcher's post-modernist view of *self*, are thus explored within the context of teacher identity [8].

2.4 The professional identity of teachers

> *"Administrator, social worker, coat finder, arbitrator, government directive reader, curriculum implementer, artistic director, form filler, language specialist, pencil sharpener, accountant, musician, fundraiser, report writer, nose wiper, public relations officer, petty cash clerk, examiner, surrogate parent, walking encyclopaedia, scapegoat … but you can just call me a teacher"* (Cath Tate cards)

Inspired through their reflective nature and manifest in their classroom practice (Coldron & Smith 1999), teachers have long sought to question "what kind of teacher am I?", "what kind of teacher do I want to be?" (Korthagen 2004). However, complicated by the varying roles and expectations teachers must acknowledge (eg. Volkmann & Anderson 1998), teacher identity has generated considerable research interest since the mid-1990s, emerging as a new sub-field of identity theory (eg. Beijaard et al. 2004, 2000, 1995; Sachs 2001). Motivated by attempts to gain an increased understanding of the influence of factors, such as age/career-stage (eg. Huberman 1995), dispositions (eg. Hodkinson & Hodkinson 2004a) and teaching context (eg. Connelly & Clandinin 1999), identity has become "the bread and butter

[8] See Footnote 6 for explanation of terminology used

of our educational diet" (Hoffman 1998:324). However, despite this, limited substantive meaning is offered to represent teacher identity, it remaining a fertile area for empirical research (Beijaard 2006; Beijaard et al. 2004).

2.4.1 Identity theory and teacher identity formation

Conveying identity theorising into teaching, it can be proposed that teacher identity is "how teachers define themselves to themselves and to others" (Lasky 2005:901). It is an ongoing process that is created and re-created through their career stages (eg. Sammons et al. 2007; Huberman 1995), subject to/by the discourses individuals occupy: their school context, governmental reforms (eg. Datnow et al. 2002) and social interactions. The adoption of "multiple identities" (Sachs 2003, 2001), each undertaking one role at any one given time and each influencing individual's perceptions, behaviour and inter-group relations, also has relevance.

The importance of social influences upon teacher identity and its implications for inter-professionalism are embedded within social identity theory (SIT) (eg. Tajfel & Turner 2001; Turner 2004, 1999), the construct upon which this review now focuses.

2.4.2 Social identity theory as a means of understanding teacher identity

Drawing upon the notions of Erikson (1959), Goffman (1959) and Ball (1972), SIT places emphasis upon social interactions, perceived opinions of others and self-awareness in building teacher identity (eg. Coldron & Smith 1999). Suggesting that social group membership equips individuals with a shared identity, it enables consideration of how teachers compare and differentiate themselves from other professionals, speculating that inter-professional attitudes/behaviours are determined through the strength of the members' identity (Adams et al. 2006). Through initial training, teachers self-categorise with their 'in-group', aligning with the collectively defined professional attributes and behaviours. "I" becomes "We" as group social identity replaces individual's personal identity. The reciprocal nature of this identity, in terms of its influence upon professional actions, is highlighted by Watson (2006).

Concurrent with social-constructivist notions that identity formation/expansion is developmental (Huberman 1995; Bloom 1988), educationalists suggest that, in the socio-psychological maturation continuum from novice to expert, teacher identity is in

a state of constant evolution (eg. Roth 2004; Cooper & Olsen 1996). With trainee teachers[9] exhibiting only the early stages of the "process of becoming" (Kuzmic 1994), through professional socialisation (Melia 1987; Lacey 1977) within Vygotsky's 'zone of proximal development' (Chaiklin 2003), influenced both formally by their mentor ('More Knowledgeable Other') (Egan 1988) and informally through professional relationships (eg. Hansman 2002), they move from "legitimate peripherality" (Lave & Wenger 1991:23) to 'full-practice' identities (eg. Furlong 1997; Hawkey 1997), with shared identity, language & practices. Thus, "the architecture of their professional selves" develops (Day & Hadfield 1996:149) and evolves as teachers practice and learn within their profession (eg. Hobson & Malderez 2006) (Figure 2.1).

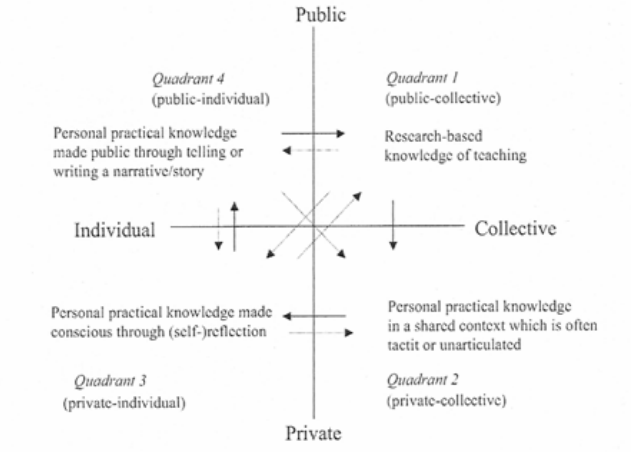


Figure 2.1: Formation of teacher identity
Source: Beijaard et al. (2004:124)

As such, teacher identity might be described as a "game … played on a field of changing complex social and political relations" (Tucker 2004:82); ongoing, involving the interpretation and re-interpretation of experiences as they occur (Goodson 2003; Day 1999), "created and revised through close relationships with others in whom [they] develop a sense of support and community … a sense of belonging" (Williams 2000:10). However, whilst upholding such representation, teachers' personal identity, the "meanings attributed to the self by the actor" (Ball 1972), both in the development of, and being developed by, their professional identity must not be ignored (eg. Bergner & Holmes 2000; Kihlstrom & Klein 1994). Whilst

[9] hereafter referred to as trainees

there are similarities between them, each teacher is different (eg. Watson 2006; Holstein & Gubruim 2000).

2.4.3 Activity Theory and Communities of Practice: their role in the development of teacher identity

Although the debate between contrasting paradigms is endless, the Vygotskian principles that mental structures, thus professional identity, is created through social interactions cannot be doubted. Whilst acknowledged as paradigmatically divergent to SIT, CoPs may be recognised as the environment in which these social interactions take place (eg. Brown et al. 2007; Wilson 2004) and thus identities are created/re-created. This therefore provides a richer body of theory from which the research may be approached. Whilst Rhodes (2006) suggests that, through fostering occupational closure, the fundamentals of CoPs are being challenged by governmental control, the philosophies of Lave & Wenger (1993, 1991) and Engestrom (eg. 2001, 1999) provide influential grounding for understanding teacher identity and an invaluable theoretical framework for understanding inter-professionalism (Daniels 2001).

Activity systems theory (AT) provides Vygotsky's 'supportive learning environment', also the accumulated artefacts, adoptive practices rules, distinctive of/to teaching. Through participation within their CoP(s) or "field" (Bourdieu & Wacquant 1992), which increases with experience and seniority (Boud & Middleton 2003), teachers transform their personal identity into a professional identity. However, with the increasing number of CoPs to which teachers procure membership (eg. Avery & Carlsen 2001), post-modernists perceive that, akin to other professions, teacher identity is increasingly pluralistic and fractured, creating sub-identities (Mishler 1999).

The relevance of CoPs and ATs to the success of inter-professionalism is explored in Chapter 2.6.

2.4.4 Other influencing factors affecting teacher identity

Whilst confirmably influential, the importance of social context, notably the school environment, upon teacher identity is not, many suggest (eg. Flores & Day 2006; Nias 1996), developed within a vacuum. This theoretical framework thus asserts the

importance of personal biography, also cognitive and emotional proclivities, upon teacher identity development.

Illustrated in Figure 2.2 these are summarised by Flores & Day (2006) to comprise four key, inexorably interlinked mediating influences.

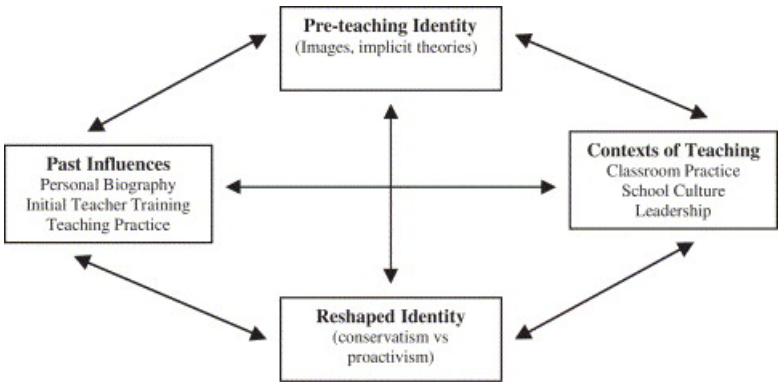


Figure 2.2: Key mediating influences on the formation of teacher identity
Source: Flores & Day (2006:230)

Using this framework, these influencing factors are summarised within Table 2.2

	Influencing factor	Key Researchers
Personal Biography	Personal events & experiences *Critical life events*	Hodkinson & Hodkinson 2005; Mayes 2001; Acker 1999; Goodson & Hargreaves 1996; Brooke 1994; Bullough & Gitlin 1994; Kelchtermans & Vandenberghe 1994; Ball & Goodson 1985
	Biographical Transformation	Knowles 1988
	"River of experience"	Pope & Denicolo 2001
	Emotional proclivity:	O'Connor 2008; Van den Berg 2002; Hargreaves 2001
	positive emotions - pleasure in student success	Sutton 2000
	negative emotions - in times of professional uncertainty	Jeffrey & Woods 1996b; Kelchtermans 1996
	Teacher's 'personal touch'	Van Huzen et al. 2005
Pre-teaching identity	Role models	George et al. 2003; Minor et al. 2002; Flores 2001; Mayes 2001; Koster et al. 1995 (in Korthagen 2004); Richardson 1996; Smylie 1995; Weber & Mitchell 1995a; Zeichner & Gore 1990
	Archetypal & stereotypical images influenced by popular culture	Grant 2002; Weber & Mitchell 1995a, 1995b
	Initial Teacher Training experiences	Murray 2004 *cf* Ziechner & Tabachnick 1981
Context of Teaching	Teaching experience: professional life-phase	Sammon et al 2007; Day et al. 2006a; Connelly & Clandinin 1999; Cooper & Olsen 1996; Huberman 1995
	As a researcher	Stenhouse 1975
	As a reflective practitioner	Moon 2004; Schon 1987
	Future professional expectations: 'designated', *vs* 'actual' identity	Sfard & Prusak 2005
Re-shaped identity	Tension of agency & structure	Coldron & Smith 1999; Reynolds 1996; Connelly & Clandinin 1995; MacLure 1993; Goodson 1992

Table 2.2: Factors influencing teacher identity development and re-development

Unexplored within Figure 2.2 and rarely addressed (Blair 1995:260) is the complex means by which gender influences teacher identity (eg Fischman 2000; Dillabough 1999). With 70% of teachers in the UK being female (ONS 2007) and the numbers of male teachers decreasing (33% in the period 1981-2005 *cf* females increasing by 5%), schools have established a "gender regime" (Connell 2002:53), irrevocably feminised

(eg. Bilken 1995), a trend dating to the nineteenth century. Whilst some (eg. ETUCE 1996) rue a perceived resultant loss of professional prestige, the nineteenth century Froebel-istic ideals of 'mothering' have remained ubiquitous. Whilst media might epitomise the disciplinarian male schoolteacher, male teachers are often perceived, as per Kantian and Cartesian notions, to be "stepping down in status" (DeCorse & Vogtle 1997), accepting a "quasi-identity" (Newman 1994:193) upon which masculine "gender codes" (Dillabough 1999:387) (now represented by government managerialism) can be imposed.

Whilst under-researched (Dillabough 1999), the view of teacher identity being linked to a gender-based system of values, has important implications, since their means of response and their perceptions of *self* are undoubtedly influenced by it (eg. Nias 1989). As female teachers strive to 'raise the glass ceiling' (Hall 1996), do they surrender their identity, defining themselves in-line with common discourse to gain legitimacy or "dis-identify" (Holmer-Nadesan 1996), developing an identity to replace the dominant discourse? Against this socio-historical backdrop, it may be suggested that gender influences individual subjectivity (Edley & Wetherell 1995) with consequential divergence in identity (eg. Burns 2005).

2.5 Representations of teacher identity

Teacher identity is not, as essentialists postulate, just a personal intrinsic property, but is socially-constructed through professional learning within CoPs, assisted by culturally available building-materials within "shifting contexts" (Stronach et al. 2002:117). Regarded as being in a state of continual flux and comprising a number of complementing sub-identities, this framework seeks to consider how teacher identity is depicted within the literature.

Whilst a comprehensive review of all literature is beyond the scope of this research, this review seeks to explore key studies, enabling a representative overview and thus tentative deductions to be drawn. A detailed synopsis of the literature (1988-2000) is found in Beijaard et al. (2004).

With research on teacher identity representation typically small-scale and in-depth (Beijaard et al. 2004), a superfluity of accounts exist as to how it be conceptualised, if indeed it can. Whilst some researchers recognise key "professional characteristics"

(Tickle 2000), there is no 'definitive list' (eg. Beijaard et al 2000; Nixon 1996; Beijaard 1995). With some of this research disparaging and cynical (eg. Stronach et al 2002), much is generalist and abstract (eg. Gaizel 1995; Preuss & Hofsass 1991); as such, it remains an area of much debate.

Although the post-modern notions of teachers' multiple identities are well-documented (eg. Sammons et al. 2007; Gee 2001, 1989), greatest clarity in the characteristics of teacher identity typically focuses upon that of science teachers, Volkman & Anderson (1998), for example, whilst acknowledging its unstable nature, encapsulate it as equilibrium between personal self-image and teacher-roles. Whilst this importance of 'agency' is concurred by Kelchtermans (1996, 1993), also Connelly & Clandinin (1999), perhaps most tangible and influential is the work of Beijaard (2004, 2000, 1999, 1995). Based initially upon the work of Sikes et al. (1991, in Beijaard 1995) this research distinguishes a three-fold classification of teacher identity: subject, role conception (often societal-derived) and relationship with pupils. This was later revised and simplified, informed by the work of Bromme (1991, in Beijaard et al. 2000), to expertise in: subject matter, pedagogy and didactics. These elements are, they suggest, of differing importance to individual teachers, consequential of their teaching context, emotional aspects of teaching, teaching 'life phase', biography and personal life.

The inclusion of subject expertise within this taxonomy lies in its long-placed curriculum importance. However such mono-cultural vision of education risks a highly restricted pedagogy; as such subjects are advocated as "resources … for enquiry and reflection, for hypothesising … interrogation … adjudicating between the valuable and the meretricious …" (Kirk & Broadhead 2007:13-14) facilitating cognitive and affective development through exploitation of pedagogical and didactical opportunities (eg. Antonek et al 1997; Brooke 1994; Connelly & Clandinin 1991).

Such nomenclature is further verified through many other works: the element of didacticism being emphasised by Nixon (1996); pedagogy by DeCorse & Vogtle (1997) and Mitchell (1997). Allied to 'subject' is the notion of its 'status' (Abell 2000); Paechter & Head (1996) hypothesising that teachers of low-status subjects typically root their identity, not within their subject, but within general teaching skills.

2.6 The implications of teacher identity for inter-professional working-practices

Having considered the socio-psychological framework of how teacher identity is formed and represented, focus shifts to reflect upon why such a construct is important in terms of the *ECM* imperative. Whilst the interactions between them are not uni-directional, this research is primarily concerned with how teacher identity might affect the inter-professionalism imperative.

Whilst FAME (2007) emphasise how CoPs are difficult to reshape and researchers (eg. Abbott et al. 2005; Stapleton 1998) stress how they cannot readily be created 'top-down', in relating inter-professionalism to the constructs of Wenger (eg. 2000, 1998), the focus is upon identifying common "boundary objects" as mediating tools (Engestrom 2004) and "expansive learning" (Engestrom 2001; Cole & Engestrom 1993). Inevitable arising tensions, as enforced "co-configuration" (Warmington et al. 2004) acquiesces the professional groups into one single CoP, will this suggests, reify a new negotiated common language (eg. Lacey & Ouvry 2000; Doyle 1997), enabling practices to be reconfigured (eg. Rogoff 1990).

Possibly representing one of Erikson (1968, 1959)'s 'crises', this will require teachers to unfreeze their current identity, change and refreeze in a new mould (eg. Ashforth 1998): a shared "bricolage identity" (Carruthers & Uzzi 2000). However, both Bateson's change model (eg. Dilts 1990, in Korthagen 2004) and Hudson (2002)'s observations of how identity acts as a barrier to effective partnerships, suggests that teachers' strength of identity, affirming their professional dedication (eg. Gaizel 1995), will incite considerable resistance (eg. Brown et al. 2000; Firestone & Pennell 1993). Whilst this may be attributable simply to teachers fighting to retain valued identities (Ashforth & Mael 1989), Ibarra (1999:764) hypothesises that when individuals are clear about the "constellation of attributes, beliefs, values, motives … in terms of which [they] define themselves", the redefinition of teacher identity, would be relatively easily achieved. However, an unclear sense of identity, combined with limited support, a lack of trust of other professionals and intimidated by the top-down imposed nature of *ECM* which forces them from pursuing their "designated identity" (Sfard & Prusak 2005) of providing moral training and instruction (Hoyle 1969) to adopt a new extended professionality, risks a lack of understanding and confusion (Dobrow & Higgins 2005).

Thus, although research into the realities of this is still embryonic (Leadbetter et al. 2007) and associated problems of knowledge ownership unanswered (eg. Cameron & Lart 2003), from a SIT perspective, such changes will only heighten inter-group rivalry, eliciting tensions and resistance as teachers find themselves located within complex Activity Systems, in which the very objects of their professional practice are undergoing radical transformation (Warmington et al. 2005) (Figure 2.3).

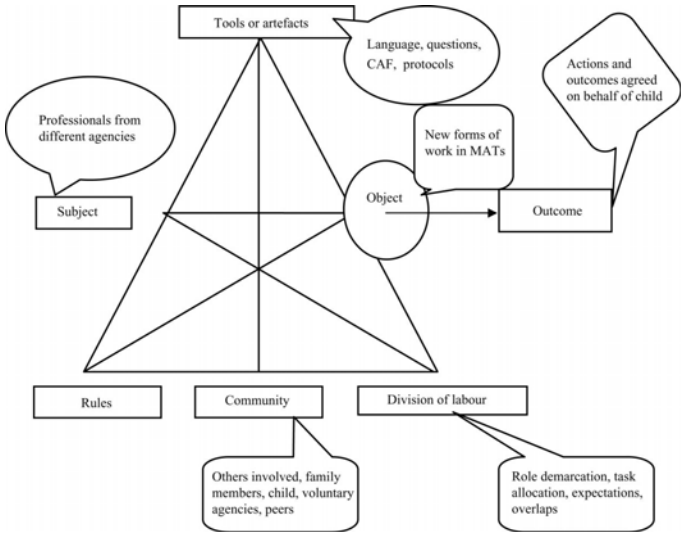


Figure 2.3: Multi-agency working as viewed as an activity system
Source: Leadbetter et al. (2007:90)

Whilst undoubtedly exigent to all professional groups involved, the implications of this "re-professionalisation" (Hargreaves & Goodson 1996:iii) is deemed especially testing for teachers. Although work by Gallois et al. (2001) indicates that plurality of identity should increase their ability to accept change, evidence suggests the contrary (eg. Bullough & Baughman 1997); a premise further illustrated through recent research (Anning et al. 2006; Frost 2005; Robinson & Cottrell 2005). Whilst resistance may in part be attributable to a vocational paradigm (Nias 1989), mindful of previous reform experiences which have rendered them "walking the tightrope of uncertain being" (Stronach et al. 2002:21, see also eg. Cochran-Smith & Fries 2001; Locke 2001), it is perhaps not unfounded.

This has significant implications for Leaders/Managers. Through support and re-assurance during identity re-configuration, teachers may emerge 'rejuvenated', possibly adopting Ibarra (1999)'s trial identities as their individual identities are re-

created; failure to provide this support however threatens professional commitment (Day et al. 2006b) and goads resistance.

2.7 Conceptual model

Preliminary thinking based upon this review of the literature has identified the key issues surrounding inter-professional working-practices and the implications of teacher identity for this. These can be developed as the building blocks required to create a conceptual model (Figure 2.4) developed by the researcher, to encompass the key ideas, issues and debates that act as a heuristic for the research, informing the methodologies and the guiding the conclusions.

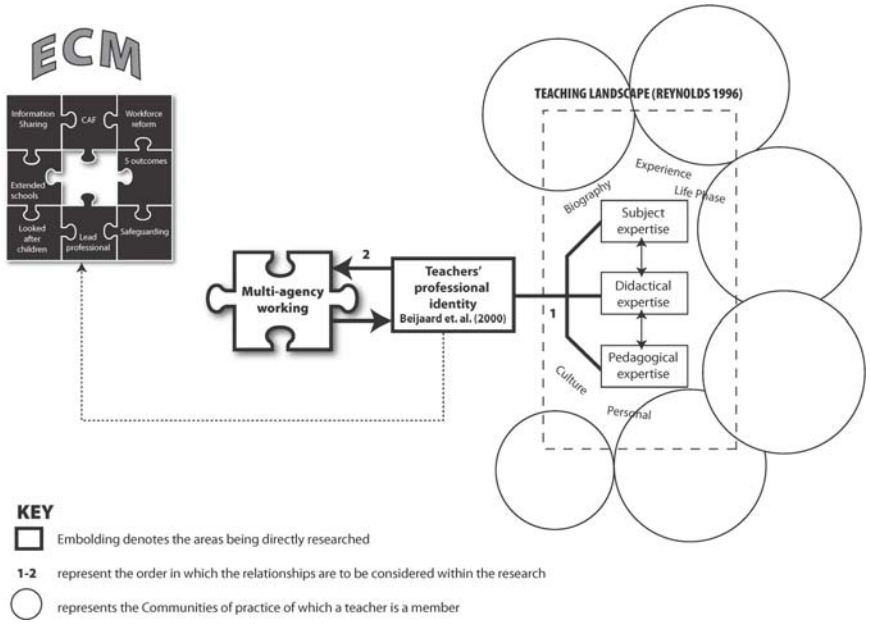


Figure 2.4: Conceptual Model for research

With the jigsaw analogy cited in both national and local government documentation to portray the *ECM* agenda (eg. House of Commons 2005; DoH 2000), Figure 2.4 depicts multi-agency (inter-professional) working, the focus of this research, as the central tenet.

Whilst the literature emphasises how this imperative will have significant implications for professionals' identities, as the silos are dissembled and boundaries crossed, the primary objective of this research is to determine how teacher identity, a profession typically omitted from research to date, might have implications for the agenda's implementation. Exploration of this however, requires an understanding of how

teachers perceive their identities represented. Denoted as **1** in the model, the initial phase of the research, informed by the tri-part model of teacher identity developed by Beijaard et al. (2000) (see Chapter 2.5), maps perceptions of teacher identity representation and also of the *ECM* agenda. Having both *ex-post-facto* and historic elements, the purpose is to provide a 'snapshot' from within one profession within one selected area of North-West England.

With teacher identity being developed not in isolation, but through social interactions, the location of which the researcher postulates to be the CoPs of which teachers procure multiple and often overlapping-memberships, their importance and also that of other influencing factors illustrated within the teaching "landscape" (Reynolds 1996) are explored as a means of grounding and interpreting the findings.

Building upon these, supported through both academic theory and abductive hypotheses, the research then seeks to explore how teacher identity might influence effective inter-professional working (denoted as **2** in Figure 2.4) and ultimately the long-term success of the *ECM* agenda (depicted as a dotted line back to the jigsaw). The dual-directional implication of *ECM* for teacher identity, although essentially unexplored within the research, is also depicted.

This model therefore provides the framework for both the research methods and interpretation of the findings; it will thus be further reviewed within Chapter 5.

2.8 Why is this empirical research important?

Acknowledged as a 'gestalt' (Korthagen et al. 2001; Korthagen & Lagerwerf 1996), teacher identity might be considered relevant only to academics, not to practitioners. However, both the influence it effuses upon teachers' beliefs/behaviours, also uncertainties developed consequential of the currently inconclusive stances of both practitioners and researchers as to how teacher identity be represented (Beijaard et al. 2004) and thus its potential implications for inter-professional working, validates this as a field of study for further empirical research.

Essentially pragmatic, this research will have value in securing greater understanding of how teacher identity is represented and influenced. Whilst work in progress (eg. Robinson et al. 2005) is seeking to determine the implications of inter-professionalism for teacher identity, this research explores unique territory, considering the

implications of identity for inter-professionalism. In complementing existing knowledge this may be useful in aiding development of strategies to facilitate greater co-operation with other groups and thus secure greater potential success for the *ECM* rhetoric.

Whilst all organisations are characterised by specific circumstances and local requirements, Wildridge et al. (2004) suggest that the underlying principles behind creating and maintaining successful partnerships are generic. Whilst acknowledging the inappropriacy of generalisation, through exposing the issues, complexities and fears of this important segment of Children's Services, it is anticipated that the research may have value in informing other teacher-groups and professional fields.

Additionally, with an inexorable link between strength of teacher identity and job commitment (Gaziel 1995; Moore & Hofman 1988) this research has value in contributing to understanding the factors that threaten teacher retention, a problem demonstrated through increasing numbers of teachers leaving their careers: 15.8% in 2001 (Smithers & Robinson 2002).

2.9 Summary

This Chapter details the academic frameworks to support this research. Initial focus is placed upon the construct of inter-professional working, the benefits and challenges of such practices for professionals.

The construct of professional identity, with emphasis upon that of teachers, is explored highlighting the vagaries of definitions afforded consequential of its approach from a diversity of discourses. Examination is made of the role of SIT in identity development and its perceived links with Wenger's CoPs and Engestrom's AT; consideration is also made of other influencing factors.

Reflection is then made upon the relationship between these two paradigms. With the literature emphasising how imposition of *ECM*'s inter-professionalism imperative is failing to take account of both professionals' agenetic and group needs, with a resultant prevalence of vulnerability and an over-riding fear of a loss of professional identity, this research argues that the strength of teacher identity threatens the development of new shared practices, identity and associated artefacts necessary for effective inter-professional working.

The Chapter concludes by suggesting that through consideration of the theoretical constructs outlined, this research has relevance in both contributing to the body of academic knowledge and within the context of practice, in nurturing the long term success of this government rhetoric.

The conceptual frameworks explored within this chapter provide the skeleton for informing both the research methodology and design, as well as guiding the data analysis. As such, the methods presented in Chapter 3 and the data analysis in the subsequent chapters is closely connected to this.

Chapter 3: Methodology

"*Method is important … By dropping golden beads near a snake, a crow once managed to have a passer-by kill the snake for the beads*"

Henry Wadsworth Longfellow (Poet, 1807-1882)

3.1 Introduction

With adequate deliberation being given to the research strategy fundamental to its success (Saunders et al. 2007:100), this Chapter critically explores the research methodology and design developed to investigate how teacher identity is perceived represented and what its implications may be for the success of inter-professionalism.

Reflecting upon the methodological paradigm and philosophy adopted, enabling the researcher to position herself in relation to the research, consideration is made of the methods employed, including the research genre and sampling. Attention is then drawn to data collection and the research context, citing awareness of internal/external reliability, validity measures and ethical implications. Finally the methods of data analysis are detailed.

3.2 Methodological considerations

Methodology is, Cohen et al. (2007:81) argue, an important "tactical consideration". Whilst "there is no blueprint" (*ibid*:78), it being directly related to the researchers' ideologies (Saunders et al. 2007), failure to make necessary consideration of this risks research confusion.

3.2.1 The Research Philosophy

Fisher (2004:13) provides a comprehensive, if "caricaturist" overview of the research philosophy continuum from the extremes of deductive positivism with "law-like generalisations" (Remenyi et al. 1998:32) to the socially constructed, uncertain, interpretivism. Amid these, wherein this research is positioned, lie philosophies in which knowledge has differing degrees of subjectivity.

With Chapter 2 highlighting the copious interpretations conferred upon inter-professionalism and teacher identity, the researcher affords a combined approach to explore teacher identity and its implications for the *ECM* agenda. The complementary value of such approach, within Education is emphasised by Burton & Bartlett (2005) and Hammersley (2002). Essentially abductive (Peirce 1955, in Levin-Rozalis 2004), in mapping teacher identity representation this research is initially grounded within the theoretical framework. However with a requirement to ascertain the subjective values and philosophies of teacher identity beheld by the respondents/participants, this "ontological endeavour" (Koch & Harrington 1998:887), beholds an ethnomethodological (Garfinkle 1967, in Cohen et al. 2007:23), phenomenological [perhaps even hermeneutic phenomenographic (Laverty 2003)] element, to nurture greater understanding of meanings evoked within the responses.

Adopting such research paradigm, akin to much of the associated literature and cognisant of the importance of SIT in teacher identity development, this is guided by a subjectivist ontology (Burrell & Morgan 1979), from a social-constructivist perspective (Berger & Luckmann 1967). Such approach contrasts with the objectivist ontology, considering individuals to be unconscious of phenomena existence (Remenyi et al. 1998:35). This is an appropriate lens through which to explore teacher identity, since the primary objective is not to discover 'truths' as suggested by a purely deductive epistemology, but to explore how individuals bring their personal and social meaning (eg. Williamson 2000; Berger & Luckman 1967), in the case of this research, their perceptions, to the phenomena. Furthermore, this approach provides a means of establishing causality between key variables identified within the conceptual framework.

It is important to acknowledge however that understandings drawn are temporally-subjective, determined by the socio-historical moment (O'Connor 2008:120), they are thus limiting in terms of generalisability.

Janesick (1994) and Phillips (1973) advocate there is no bias-free or value-free research. With a risk of subjectivism being asserted through the researcher's axiology, "instead of trying to erase all personal traces so as to provide the reader with an illusion of unmediated access to the subject" (Kilduff & Mehra 1997:464), akin to post-modernist beliefs, the researcher declares her ideological stance to be influenced

through her being a trained teacher. Whilst not practitioner-research and thus physically removed from the research situation *per se*, this position will inevitably impinge upon the research situation and the data interpretation.

3.2.2 Research strategy

To implement the research a sequential, mixed-methods strategy is adopted (eg. Cresswell 2003; Tashakkori & Teddlie 1998). Conducted in two phases, comprising survey and case-study, enables the collection of both qualitative and quantitative data.

The benefits and failings of both approaches are well documented (eg. Saunders et al. 2007; Bryman 2004). Whilst attaining "information richness" (Cohen et al. 2007) "text … [is] terribly cumbersome … dispersed … poorly structured and extremely bulky" (Miles & Huberman 1994:11), yet quantitative research is inflexible (Robson 2002) and susceptible to researcher assumption (Layder 1993). Through "bridging the divide" (Shah & Corley 2006) and viewing them as "complementary rather than rival camps" (Jick 1983:135), the researcher is able to draw upon their respective strengths. Such strategy, invaluable where complexities of human nature are being explored, reduces reliability upon one specific paradigm and thus method-boundedness (eg. Gorand & Taylor 2004). Working abductively with the data, such methodological synergy and "eclecticism" (Hammersley 1996) enables acquisition of multi-faceted and rich empirical descriptions unfeasible through a mono-method approach. Furthermore it secures triangulation of data sources (Strauss & Corbin 1990; Denzin 1989a,b, 1970; Jick 1983, 1979).

Whilst Hinchman & Hinchman (2001) consider identity to emerge through narrative, this popular approach to studying teacher identity (Soreide 2007, 2006) was not adopted being heavily time-consuming and criticised for its focus on personal experiences at the cost of the wider societal context.

3.3 Research design

The initial stage of the research employs a survey strategy. Assumed through an internet-mediated questionnaire to Secondary schools within Cheshire and the Wirral, this provides a means of collecting quantitative and qualitative data from a relatively

large sample to determine perceptions of both teacher identity representation and of the *ECM* imperatives (Chapter 3.4.3).

Acting as bases for 'extended schools' greatest changes in respect to *ECM* might be expected in primary schools; however, due to the generalist nature of primary teachers, for this research secondary teachers were approached, professional socialisation reinforcing their subject allegiance as "a badge of their professional identity" (Kirk & Broadhead 2007:13).

Whilst simpler to access trainees and teacher-educators, restricting the research to practicing teachers was a twofold decision. As an internal researcher, participants' perceptions of the researcher's grade-status may have risked cognitive access, influencing data acquisition. Undertaking the research within schools negated such problems. Secondly, cognisant of suggestions that both transition to teacher-educator involves the creation of a new identity (Dinkelman et al. 2006; Murray & Male 2005) and that trainees are in a period of "shifting identity" (eg. Bullough & Gitlin 2001; Calderhead & Shorrock 1997), the researcher considered such participants' perceptions potentially divergent.

Although resource efficient, Robson (2002) suggests self-completed questionnaires are superficial, there being no check on response-honesty. Thus acknowledged, the second phase of the research, involving face-to-face interviews with teachers holding subject-orientated and pastoral-orientated roles within a case-study secondary school in Chester (Chapter 3.4.4), will verify the emergent data, whilst also acquiring deeper empirical understanding. Whilst some perceive case-studies as not 'true' research (eg. Nisbett & Watt 1984:8) the researcher does not concur this view, acknowledging their strength for exploring 'real-life' examples (eg. Freebody 2003; Bassey 1999).

For this research one case-study is selected; the reasons being twofold. Firstly, temporal constraints meant that data collection from more than one school be unachievable. Secondly and allied to the first, this phase is designed only to clarify and explore unexpected responses acquired through survey.

The methods were thus selected as being *fit for purpose* for the research questions identified, within the time constraints imposed. However, the researcher reserved the right to revise the research design as the research proceeded and consequential of initial data analysis.

3.4 Research procedures

In order to fulfil the needs of this small-scale empirical research, following a review of the academic literature to secure greater conceptual understanding and to act as a catalyst to frame the research methods and data interpretation, the following procedures were instrumented.

3.4.1 Pilot study

Where the purpose of research is to describe and categorise rather than quantify, piloting is important (Sim & Wright 2000; Field & Morse 1992). A small scale exploratory pilot, undertaken through completion of the questionnaire prototype, sought the views of a convenient, yet judgemental, sample of 24 secondary teachers from the locality. Devised around the themes outlined by Proctor (2003:192-193), its purpose was to assure the questionnaire's internal validity and reliability. Clarifying timings, assessing the phraseology and identifying redundant questions, this also restricted levels of non-response and acquiescence. Subsequent discussions with the participants enabled necessary modifications, ensuring its face-validity, suitability and reliability in gathering the data required to fulfil the research objectives.

A pilot semi-structured interview was also undertaken to ensure face-validity and clarity.

3.4.2 Identifying the sample

With a population being "the entire aggregation of cases that meet a designated asset of criteria" (Polit & Hungler 1991:254), the frame for this research was essentially unknown; thus the views and perceptions were sought from a sample of the population. With the "quality of research stand[ing] or fall[ing] … by the suitability of the sampling strategy" (Cohen et al. 2007:100), appropriate sampling, within temporal and spatial constraints, is critical. Whilst some suggest there are "no rules for sample size in qualitative sampling" (Patton 1989) the key being to "focus strategically and meaningfully rather than to represent" (Mason 2002), with the research additionally comprising quantitative data collection, sampling sufficiency is imperative to permit quantitative analysis. Non-probability sampling is adopted.

For the questionnaire survey a funnelled-sampling sequence (Erikson 1986) was undertaken. Geographically stratified to Cheshire and the Wirral, the sample was narrowed to teachers within Partnership schools associated with the researcher's workplace. The questionnaire was completed by a self-selected, volunteer sample (Fink 2003) from these schools.

For the case-study, purposive, volunteer sampling (Cohen et al. 2007:116) was adopted at a school 'nested' (Miles & Huberman 1994:29) within the questionnaire sample. This school was known to the researcher and thus accessible [10].

Such sampling strategies are deemed *fit for purpose* since it was not intended that generalisations be made beyond the sample, nor theory engendered for the whole undifferentiated population through statistical inferences.

3.4.3 Questionnaire survey

Initial mapping of teacher identity representation and perceptions of *ECM*, was undertaken through means of an internet-mediated questionnaire distributed, via email, on 1st December 2007 to the selected sample of 126 secondary schools within Cheshire and the Wirral (Appendix 1). An accompanying information sheet advised of the research aims and purpose, assuring confidentiality and anonymity of responses. A follow-up was made, to schools having not returned the questionnaires, on 27th January 2008.

The benefits of such distribution compared with other dispatch-mediums are well explored, (eg. Cohen et al. 2007:150-154) and are thus not considered in detail. With assurances of the recipients being PC-literate (Cracknell, *pers comm.*10/10/07) this facilitated collection from a geographically-dispersed sample with a greater confidence of 'correct delivery'. Prior working contact with these schools negated requirements for the questionnaire to be dispatched in alternative formats to accommodate specific needs.

Comprising six sections (Table 3.1), the survey includes both closed deductive questions, based upon 5-point Likert scales to measure the attitudinal response of the

[10]Although the researcher had professional links with the school, the participants themselves were unknown to her

participants to questions not directly measurable; also inductive, open-ended questions. Whilst some (eg. De Vaus 2002) suggest Likert scales create false opinions, their value over uni-item psychometric scales in reducing random measurement (Nunnally & Bernstein 1994), justifies this risk. A 'neutral' category (3) is included since, whilst it would be expected that respondents have an opinion, ignorance might prevent this and thus this becomes a valid response (Schuman 1996). The open-ended questions are designed to encourage the respondents to impart their personal views, beliefs and perceptions. To encourage data validity, some duplication of questions is incorporated.

Before analysis, statement values will be reversed where necessary. The cumulative value of the responses in each attitudinal scale comprises the respondent's index score.

As well as eliciting data for quantitative analysis and depiction using descriptive statistics, responses secured from this phase informed subsequent semi-structured interviews.

	Purpose	Method	Data collection format
1	Background variables	Pre-coded	Forced-choice
2	Representation of teacher identity	Research instrument devised by Beijaard et al. (2000) informed by the work of Bromme (1991) (Chapter 2.5)	Awards 100 points to three key identity elements: subject expertise, pedagogical expertise & didactical expertise
		Clarification why points were awarded; why & how this may change	Qualitative open question
		Consideration of the relevancy of this representation	Qualitative open question
3	Perceived importance of teachers' professional identity	Brown et al.'s (1986) scale of inter-group identification measuring the three core facets of awareness, evaluation & affect implicit within definitions of SIT (PI scale)	Likert scale (scores of 1-5; 1=never, 5=very often) Comprises five negatively orientated statements, denying identity & five positively orientated statements, affirming identity Calculates a score range 10-50; higher scores indicate a greater strength of teacher identity
		Reason(s) for choosing the teaching profession	Qualitative open question
		Work satisfaction scale informed by the work of Ishikowa (2007)	Likert scale (scores of 1-5; 1=not at all satisfied, 5=very satisfied)
4	Implications of *ECM* in relation to teacher identity (ECM scale)	Perceived inter-professional understanding Differing behaviours & increasing skills base Perceived changes to teacher identity	Likert scale (1=strongly agree, 5=strongly disagree) Calculates a score range 11-55; lower scores indicate a more positive perception of the *ECM* agenda
5	Teachers' attitudes to working &/or learning inter-professionally (IPW/L scale)	Informed by the work of Pollard et al. (2004), Parsell & Bligh (1999) & Reid et al. (2006) considering perceptions of: • professional stereotyping • co-operative working • benefits of inter-professional working (IPW) &/or learning (IPL), personally & professionally	Likert Scale (1=strongly agree, 3=neutral, 5=strongly disagree), Calculates a score range 8-40; lower scores (8-16) indicate a greater openness to inter-professional working /learning
6	Further comments	Further comments / to elaborate upon previous responses	Qualitative open question

Table 3.1: Components comprising the questionnaire survey

3.4.4 Semi-structured Interviews with a case-study school

Following initial analysis of the questionnaire returns, face-to-face, semi-structured interviews were to be conducted in a Chester case-study school, the purpose being both to confirm and further explore preliminary observations; enabling greater holistic understanding.

However, consequential of time constraints imposed by the school required the interviewing to be replaced by one-to-one telephone interviews; a method unfulfilling of the researcher's preference. Whilst the value of these have been well-reviewed (eg. Cohen et al 2007; Carr & Worth 2001) especially in combination with questionnaires (eg. Wishart 2003), problems not attributable to face-to-face interviews may have been encountered through their use. Most notably for this research, through the limited opportunity to develop a rapport with the interviewees, information provided by respondents may be less in-depth (Thomas & Purdon 1994), reducing both the volume and 'openness' of information secured; a problem further exacerbated through the lack of non-verbal observations (eg. Miller 1995). Cognitive access may have also have been reduced through difficulties encountered in developing the more complex questions (Saunders et al. 2007:10).

Undertaken on 28th and 29th February 2008 with three participants, this sample, although notably small, was differentiated in terms of gender, experience and school-role. Participants were provided with an information sheet and consent form in advance (Appendix 2) outlining the purposes the research and the interview phase of it. Signed consent was secured which guaranteed anonymity and detailed their right to withdrawal (see Chapter 3.7).

In common with semi-structured interviewing a pre-developed *aide memoir*, based upon pre-determined issues central to the research, was devised to facilitate a rich professional dialogue (Mishler 1986) (Appendix 3). Whilst structured interviews may have captured precise codeable data, the semi-structured format facilitates within-interview flexibility (Minichiello et al. 1996) enabling unexpected responses to be followed-up. Compared with unstructured interviews favoured by pure exploratory research (Saunders et al. 2007), this approach ensures academically-grounded, in-depth questions, to attain greater clarity and a deeper understanding of both teacher

identity and *ECM* perceptions; also influencing factors (personal biographies and life histories).

Conducted in accordance with the guidelines of David & Sutton (2004), to encourage detailed responses, facilitative communication skills were employed (Table 3.2):

Probing (eg. Uys & Middleton 2004) to: • elicit further information as required • request the participants to provide more information • to provide examples of or solely asking why?;
Reflecting on or repeating the content and feelings of participants' responses (eg. Wilson & Kneisl 1988);
Clarifying and paraphrasing the participants' comments, where necessary.

Table 3.2: Facilitative communication skills employed within the interviews

The final question, a 'catch all', enables participants to inform of any information not previously emerging. Whilst not all participants took advantage of this, it was used by some to re-iterate their dominant feelings.

No pre-determined time for the interviews was established, ensuring they were sufficiently long for a rapport to be established yet not overly protracted.

3.4.5 Summary of data collection methods in relation to the objectives

Table 3.3 summarises the methods undertaken to meet the research objectives stated.

	Objective	Data collection method & source
1	To understand contemporary literature on teacher identity	Literature review of the academic literature, journals, conference papers & government papers
2	To understand perceptions of teacher identity representation	Questionnaires to a sample of secondary school teachers within Cheshire & Wirral. This initial mapping informs the interviews.
3	To gain an understanding of the implications of this teacher identity for the inter-professionalism imperative	Interviews conducted with secondary teachers in a Chester case-study school to enable the collection of more detailed, situated, qualitative data.

Table 3.3: Summary of methods undertaken to meet the stated research objectives

3.5 Research context

3.5.1 Gaining access

As an external researcher, physical access, whilst restricted, was aided through the researcher's employer's Partnership with a number of Cheshire and Wirral schools. Contacts with trainees' mentors and subsequently with their colleagues facilitated both the questionnaire and interview phases of the research. However, the research still relied upon the goodwill of individuals.

3.5.2 Survey respondents

The questionnaire respondents are drawn from secondary schools within Cheshire and Wirral LEAs.

Comprising a population of around 680,000 (ONS 2004), Cheshire LEA is the sixteenth largest in England and Wales. Responsibility for administering the *ECM* agenda lies predominantly with the *Children and Young People's Strategic Partnership* which focuses upon prevention through joined-up working.

Wirral LEA comprises a population of approximately 313,000 (ONS 2004), which whilst growing, is aging. Wirral's *Children and Young People's Plan* (Wirral 2008) has developed proposals for ensuring access to information for all professionals working with children, multi-agency planning, workforce development and inclusion.

Questionnaires were emailed to 126 secondary schools within these LEAs; only one was returned as 'undeliverable'. From these 31 questionnaires were returned within the requested time period and a further nine were completed through being taken to potential participants (whom had failed to respond by email). As such an active response rate of 32% (Neumann 2000, in Saunders et al. 2007) was secured. Although not meeting the accepted 5% margin of error favoured by deductive research, with there being no requirement of generalisability from the results, and with Saunders et al. (2007:212-215) suggesting a 11% response rate typical for external participants and 30% for internal participants, this response is acceptable.

All questionnaires returned were complete, thus no 'missing data bias' is introduced.

3.5.3 Interview participants

The case-study school is a large (1662 pupils), co-educational 11-18 comprehensive. Although lying within a catchment of 'above average' social and economic conditions, approximately one-third of students are from outside the locality. The school secured a 69% achievement rate at GCSE (5+ grades A*to C) in 2007, comparing favourably with the county average of 63% and national average of 61% (DfES 2007b). The latest *Ofsted* inspection (March 2007) awarded the school a Grade 2 (Good).

3.6 Validity and reliability

Whilst no measuring instrument is perfect (eg. William 2000), "if a piece of research is invalid then it is worthless" (Cohen et al. 2007:133).

Validity may be defined as "whether indicator(s) devised to gauge a concept really measure(s) that concept" (Bryman 2004:73) and reliability, as "the consistency of a measure of a concept" (*ibid*:71), thus its stability, internal reliability and inter-observer consistency. Whilst analytically different, these terms are intrinsic: validity presuming reliability (Bryman 2004:74).

Consideration of these issues (Table 3.4) is made through Lincoln & Guba (1985)'s four-fold classification: credibility, dependability, confirmability and transferability.

	Risk	Control mechanism(s) employed within the research
Confirmability[11]	Assurance that other researchers would make similar conclusions from the data	Through achievement of credibility & transferability (Lincoln & Guba 1995).
	Construct validity	Rooting research constructs within a wide literature search & through providing this information for the participants as required.
Transferability		The data describes only those informants studied; an internal as against external validity & transferability. Generalisations should not be drawn from it.

Continued overleaf

[11] If accepting that confirmability can never be absolute, due to researchers' experience bias (eg. Easterby-Smith et al. 2002), then this research cannot be deemed confirmable; subjectivism is inherent, other researchers undoubtedly approaching the data analysis from a differing stance, influenced by their experiences & personal philosophy.

	Risk	Control mechanism(s) employed within the research
Credibility	"Confidence in the truth of data" (Lincoln & Guba 1985:235) & *halo effect* consequential of there being no investigator triangulation (Denzin 1989b) Personal bias having a propensity to influence the findings	Methodological triangulation (eg Strauss & Corbin 1990; Jick 1983, 1979; Denzin 1989a,b) through combined research approach; Recording of all observations throughout both phases of the research; Verification & authentication of the data collected confirmed by an audit trail.
	Researcher personal involvement & beliefs may have limited her ability to recognise certain insights	Assurance that others understand & can replicate the research & draw personal conclusions through: • framing the researcher's influence upon the study (Chapters 1.4 & 3.2.1); • provision of participant/respondent contextual details (Chapter 3.5); • transparency in the data collection & analysis (Chapters 3.8 & 4).
	Mis-information (Bilmes 1975, in Lincoln & Guba 1985) generated through social desirability (Dillman 2000) & acquiescence (Foddy 1993)	Researcher familiarity with the research context increasing ability to detect data distortions & 'uncharacteristic' results; Efforts to minimise question-types in which such might be procured; Listening (in interviews) to detect responses where these problems might prevail.
	Subjectivity of researcher influencing interviewees responses	Semi-structured interviews, procuring lesser influence than open interviews (eg. Knight & Saunders 1999); Uniformity of procedures & objectivity ensured, as far as possible, within the constraints of the measure of error created consequential of interviewer experience & participant bias; Framing the researcher's influence upon the study (Chapters 1.4 & 3.2.1).
Dependability	Future replication (Lincoln & Guba 1985)	Clarity in methods of data collection & analysis (Lattu 2003) (Chapters 3 & 4)
	Trust in findings, facilitating future consideration & deliberation by academia & practitioners	Methods adopted & data analysis undertaken sufficiently rigorous (Chapters 3 & 4)
	Variation in characteristics of respondents & non-respondents (eg. De Vaus 2002)	Reminders to return questionnaires (Chapter 3.4.3)
	Influencing responses: through sequencing of the questions	Reduced through piloting (Chapter 3.4.1)
	Internal reliability & validity of the questionnaire scales	Cronbach's alpha (α) for internal reliability' (Chapter 3.8.1) as an alternative to the test-retest method; Cognisance of previous research demonstrating: • Professional Identity scale (Section 3a) has psychometrically acceptable levels of reliability & validity, [α=0.85 (Carpenter 1995); α=81-0.95 (Barnes et al. 2000); α=0.79 (Adams et al. 2006)]; • Bromme (1991)'s representation of teacher identity demonstrated to have acceptable limits of reliability & homogeneity (Beijaard et al. 2000)

Table 3.4: Reliability and Validity: Risks and control measures within the research

Finally, it cannot be disputed that the interviewer's ability was strongly tested in attempts to capture all responses and pedagogical moments. Whilst this may have been reduced through a second interview, enabling deeper exploration, this was beyond the resource capabilities of this particular research. Such may however indicate further research opportunities for the future.

3.7 Ethical considerations

> *As a researcher your first responsibility is to the individuals you study … your research must not interfere with their physical, social or mental welfare"* Kane (1991:212)

Such bold statement is significant since this research intrudes into the private spheres of individuals involved. Constrained by ethical considerations related to the anonymity of personal opinions, compliancy with both the University of Chester and the British Educational Research Association (BERA 2004) Ethics guidelines was assured. In lieu of this only the researcher had access to the raw questionnaire and interview data; respondents/participants were assured that their school would be afforded only with a summary report, the data in a non-traceable, aggregated form.

To protect anonymity and ensure confidentiality in both the recording and the reporting of the research, respondents/participants were identified numerically, thus ensuring non-traceability (eg. Frankfort-Nachmias & Nachmias 1992). The school and individuals' names remain strictly confidential.

Informed consent was obtained from all interview participants following their receipt of written details of the purpose and intended outcomes of the research as well as details of their expected commitment (Appendix 2). All participants reserved the right to withdraw from the research or to refuse to respond to specific questions without explanation or loss of respect (eg. Cohen et al. 2007). Additionally they were informed of their right to ask questions at any stage.

In accordance with the Data Protection Act (1998) questionnaire returns and interview data were stored in a locked filing cabinet.

3.8 Key Limitations of the Research

The key limitations of the research can be summarised as:

i. The sampling frame focuses upon only a small number of respondents/participants, from a restricted geographical area, relative to the population;

ii. There is limited generalisability of the findings, even within teaching and certainly beyond the profession's boundaries.

Although outside the constraints of this research, acknowledgement should be made of the complex interactions of gender within the research design both increasing its complexity and risking distortion of other influencing factors (Burns 2005).

3.9 Analysis of the data

The analysis of abductive studies can be undertaken in a diversity of ways (Larsson & Holström 2007:57). As such both qualitative and quantitative approaches are employed.

3.9.1 Preparation of the variables for analysis

To facilitate quantitative analysis, a number of the categorical results acquired within the questionnaire survey required pre-treatment: post-coding (Appendix 4). In the case of the 'previous career' variable "SOC 2000" (ONS 2000) was utilised. Additionally missing data was assigned a *missing data* code of '99' to enable its exclusion from subsequent analysis.

Due to the small sample size, some categories had insufficiency of data to enable statistical analysis and were therefore collapsed and re-coded as indicated in Table 3.5

Initial Category	Responses recorded	Collapsed category
Subject taught	Science Maths ICT	Science
	Music Drama Art RE PE Geography Languages	Arts
Years taught in a school[12]	1-7 years	Phase 1 (TLP1)
	8-15 years	Phase 2 (TLP2)
	16-23 years	Phase 3 (TLP3)
	24-30 years	Phase 4 (TLP4)
	Over 30 years	Phase 5 (TLP5)
Other roles/responsibilities	*Pastoral role details*	Yes (Y) No (N)
Previous career experience	*Previous career experience details*	Yes (Y) No (N)

Table 3.5: Collapsed and re-coded variables

Before index scores could be calculated, being scaled in the reverse direction to the remainder of the questions, some variables were reverse coded (see Chapter 3.4.3). This was required for the following:

Section 3a, questions Q6-10 inclusive

Section 4a, Q10

Section 5, Q1&2

Initial psychometric analysis, undertaken to ensure the reliability (internal consistency) and validity of the questionnaire's attitudinal scales, uses Cronbach's alpha (α). As an alternative to the test-retest method, this considers the consistency of individuals' responses, calculating an alpha coefficient (α), whereby α=0 indicates no internal reliability (ie. no consistency in the responses) and α=1.0 indicates perfect internal reliability. Typically a value of $\alpha \geq 0.60$ is deemed acceptable (Rosenthal & Rosnow 1991). Through observation and subsequent exclusion of the values calculated for each response, the alpha scores may be increased. For both PI and ECM scales all items were consequently included in the final index score. For the

[12] Years taught in a school are reduced to the five Teaching Life Phase (TLP) categories of Sammons et al. (2007)

IPW/L scale this indicated omission of Q1&2; thus only Q3-8 were included in the final index score (Appendix 5).

The following calculations were secured:

Scale	Cronbach α	Outcome
Professional Identity scale (PI) (Section 3a)	α=0.76	α-value did not increase when any items within the scale were excluded; as such, all 10 items were retained
Impact of ECM scale (ECM) (Section 4a)	α=0.75	α-value did not increase when any items were excluded; as such all 11 items were retained
Inter-professional working / learning scale (IPW/L) (Section 5)	α=0.74	α-value did not increase when any items were excluded. Subsequent EFA however indicated a requirement to omit the scores for Q1&2

Table 3.6: Internal reliability calculations for the three scales used within the questionnaire
Source: Extracted from analytical calculations in Appendix 5

With the Cronbach alpha values being above the threshold for scale consistency (Rosenthal & Rosnow 1991) the validity and reliability of the questionnaire is thus assured.

For further discussion relating to the interpretation of Cronbach's alpha refer to Field (2005).

3.9.2 Analysis of the quantitative data collected by questionnaire

To both identify trends in the data and to determine relationships and differences between variables, statistical analysis is undertaken using SPSSv14.0 to which the raw data, collated in Microsoft Excel, is easily exported. Initial checks for missing data or errors are made before analysis is undertaken, thus reducing subsequent errors.

3.9.2.1 Descriptive statistical analysis

Demographic data acquired through the questionnaires is summarised through tabulation to enable an overview of the sample structure to be identified and analysed in conjunction with the data collated. Additionally exploratory analysis is undertaken.

Total summation scores are calculated for the indexes: Sections 3a: PI, 4a: ECM and 5: IPW/L of the questionnaire. Central tendency metrics such as mean, median and

mode, with the associated measures of dispersion, are calculated, as deemed appropriate. Data is displayed through the use of appropriate graphical analysis.

3.9.2.2 Inferential statistical analysis

Analysis seeks differences and relationships between the attitudinal semantic differentials. With the small sample size, the data cannot be reliably matched to a specific distribution type; however, having been generated within boundaries imposed by the scale values, it can be asserted that there will be no real outliers and as such bivariate correlation and t-statistic/ANOVA are apposite. Complex statistical analysis is however unreliable. The analysis employed and its purpose is detailed in Table 3.7

Whilst deductive research typically considers the 5% significance level (p=0.05) an appropriate level of confidence, Cohen et al (2007:520) suggest this is "an obstacle not a facilitator". As such, for this research, especially with the relatively small sample size secured, the inferential statistic, '**effect size'** (E^2), measuring the strength of the relationship (overlap in variances) between the two variables, is invaluable. To interpret the strength of the E^2 values, Cohen (1988, in Pallant 2001) suggest the following: E^2=

0.01 = small effect
0.06 = moderate effect
0.14 = large effect

As such, although, for statistical accuracy, the significance is stated within Chapter 4, E^2 values are also stated where appropriate.

Purpose	Statistical test & null hypothesis [H_0]	Outcomes
To consider the degree to which the Dependent variables (DVs), the index scores for: • PI • ECM • IPW/L are related to the Independent variables: (IVs) of: • Gender • Subject area taught, • Teaching Life-phase • Previous career experience • Pastoral role	**Bivariate correlations** using Pearson's Product Moment Correlation Coefficient (r-value) [H_0: There is no relationship between the DV & IV]	Direction & strength of relationships identified through consideration of the sign (+/-) & value calculated For purely deductive research a value of +/-5 is typically acceptable (Saunders et al. 2007); but exploratory research, accepts: 0.2≥r≤0.29 slight relationship 0.3≥r≤0.49 medium relationship 0.5≥r≤1.0 strong relationship (Cohen et al. 2007)
Effects of two or more IVs on the individual DVs; identifies the contribution each IV makes to the overall outcome (Refer to Tabachanick & Fiddell 1996 for detailed theory).	**Multiple Regression Analysis** (β value) [H_0: There is no relationship between the DV & IVs]	
Between group comparisons of the attitudinal semantic differentials (index scales) (subject to the usual parametric test assumptions)	2-tailed, independent samples **t-test** comparing the means of two datasets to determine if they are statistically different [H_0: There is no statistical difference between the means]	High *t*-value suggests a low probability that differences in the data has occurred due to chance
	One-way, between-groups **Analysis of Variance** (ANOVA) to analyse the variance of the data to determine if the independent categories of data are significantly different (*F*-ratio), through comparison of the means [H_0: There is no statistical difference between the means]	High *F*-value suggests a low probability that differences in the data categories has occurred due to chance. Tukey *post hoc* analysis is calculated, where appropriate, to determine where H_0 is supported (ie. which groups are different) by grouping together sub-samples whose means are not statistically significant from those whose are statistically significant.
Between group comparisons of the attitudinal semantic differentials (index scales) where analysis of more than one DV is required	**Multivariate Analysis of Variance** (MANOVA) to identify whether the mean differences between the groups on the combination of DVs has occurred due to chance [H_0: There is no statistical difference between the means].	

Table 3.7: Statistical analysis employed in data analysis (Reported in Appendix 7)

3.9.3 Analysis of the qualitative data collected by questionnaire and interview

To ensure researcher bias does "not intrude upon the data" (Strauss & Corbin 1990:21), some postulate that qualitative data should not be analysed *per se*, but that the researcher should present the data such that the "informants speak for themselves" with the reflective nature of the report stimulating lines of inquiry (eg. Holliday 2002).

However, mindful of the unstructured nature of the qualitative data collected within both the questionnaire and interviews, simplified categorisation and theme analysis is employed, enabling the development of theoretically informed interpretations. Comprising elements of Miles & Huberman (1994)'s three-step and Cresswell (2003)'s eight-step methods, the three-stage procedure utilised is presented in Table 3.8; each stage brings the analysis to a higher conceptual level (Appendix 8).

Stage 1	Categorisation: colour coding, of initial categories developed from the theoretical framework; identification of further categories
Stage 2	Recognition of relationships between variables and across the data sets
Stage 3	Interpretation of patterns and relationships and identification of underlying themes conveyed.

Table 3.8: Three-stage procedure employed to analyse qualitative data collated

Throughout this process cognisance of personal bias is paramount to avoid influencing interpretation.

3.10 Summary

This chapter provides details of, and justification for, the integrated research paradigm and the resultant sequential mixed-methods research approach used to explore the research objectives. Employing both survey and case-study methods: a questionnaire to a sample of secondary schools within Cheshire and Wirral and semi-structured interviews within a purposefully sampled Chester case-study school, this small-scale empirical research will secure data triangulation and facilitate abductive interpretation.

Whilst consideration is made of the measures taken to ensure validity and reliability, deliberation is also made of the ethical issues arising through the research process.

Details of the data analysis, both quantitative and qualitative, to facilitate interpretation of the data collected, are outlined. A detailed description of this analysis, with the research findings, is presented in Chapter 4.

Chapter 4: Findings

"*I keep six honest serving-men (They taught me all I knew); Their names are What & Why & When & How & Where & Who*"

(Rudyard Kipling 1902 *The Elephant's Child*)

4.1 Introduction

This Chapter, which forms the basis for discussions developed in Chapter 5, is structured in accordance with the research questions (Chapter 1.3.1) and the conceptual model (Figure 2.4).

Consideration is made of the application of the methodology, focus then shifting to report and examine the data collected through the sequential survey and case-study. Collected mixed-method, the data could, in essence, be examined separately however inherent links between them justifies their simultaneous consideration.

Following an overview of participant demographics, initial analysis considers perceptions of teacher identity representation. Drawing upon the tri-part division of Beijaard et al. (2000) (Chapter 2.5 and Table 3.1) statistical analysis establishes the importance of influencing factors upon this perception. Attention is then drawn towards the importance placed upon teacher identity, considering the data derived from the professional identity scale (Table 3.1) and its relationship with the independent variables. Finally, in focussing upon ways in which *ECM* interacts, or is expected to interact, with teacher identity, analysis determines their attitudes towards it and requirements for inter-professional working/learning (IPW/L), both for themselves and their profession.

4.2 Application of methodology

The central theme of this research is secondary teachers' perceptions of teacher identity and the implications of this for *ECM*'s inter-professionalism rhetoric. Exploration of the devised research questions has, as detailed in Chapter 3, been realised through:

i. an integrated research paradigm, guided by a subjectivist ontology from a

social-constructivist perspective;

ii. combined abductive research approach;

iii. sequential mixed-methods strategy comprising questionnaire survey and interviews.

The benefits of such approach have been explored and the constraining factors, especially ethical and reliability/validity considerations, detailed. The internal reliability of the index scales has been assured.

This Chapter therefore seeks to analyse data collected in order to satisfy the research questions. Quantitative data is presented and statistically analysed in accordance with the procedures detailed in Chapter 3.9.1 (Appendix 7). The key themes perceptible through analysis of the qualitative data collated (Chapter 3.9.2 and Appendix 6b), are used to support the quantitative data.

Chapter 5 will discuss these findings, and the juxtaposed influencing factors identified, within the context of the literature.

4.3 Findings for the Research Questions

With an active response rate of 32% (N=40) (Chapter 3.5.2), the number and proportion of survey respondents along with their demographics and experiences are detailed in Table 4.1 and depicted through Figures 4.1 to 4.5

Whilst no attempts were made to 'control' the respondents' demographics, there is, coincidentally, an equal split in the gender of the participants.

A total of 10 different subjects are taught by the respondents (Figure 4.1)

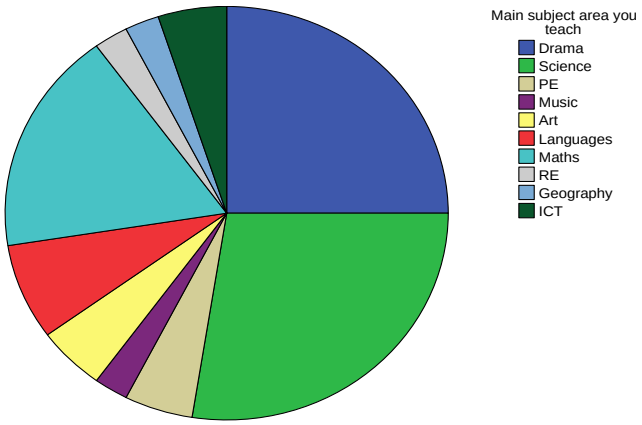


Figure 4.1: Subjects taught by questionnaire respondents (n=40)
Source: Data extracted from questionnaires returned

With the data being skewed towards particular subjects: Drama (n=10) and Science (n=11) and with there being only one respondent in some subject areas (Geography, Music and RE), these were 'collapsed' into the broad subject divisions of 'arts' and 'sciences' (Chapter 3.9.1). Within this, 47.5% (n=19) were 'science' and 52.5% (n=21) 'arts'. The resultant gender spilt was analogous (Figure 4.2).

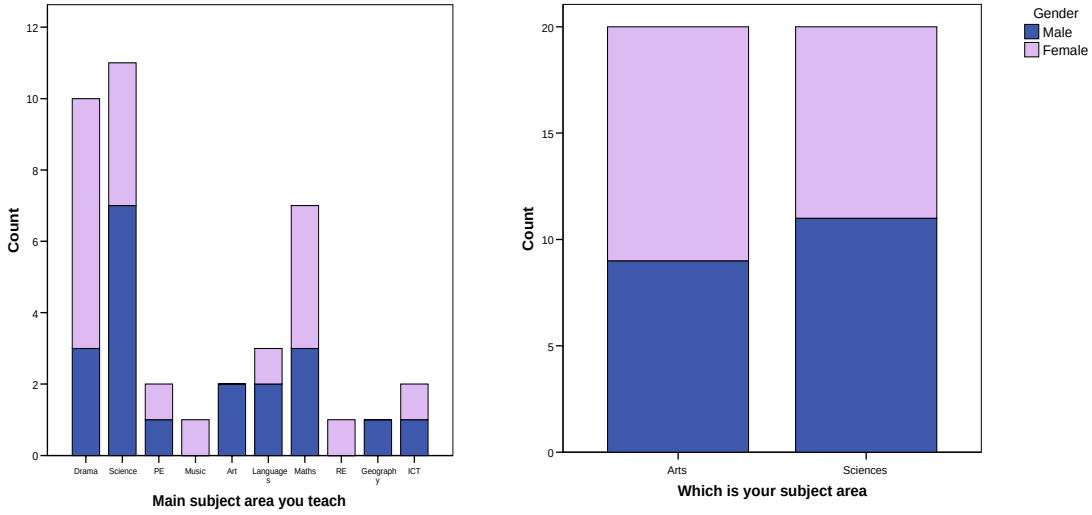


Figure 4.2: Subject taught by the questionnaire respondents, distinguished by gender (N=40)
Source: Data extracted from questionnaires returned

			Gender		Subject area		Teaching Life Phase (TLP)					Previous career		Pastoral resp.	
	n	% of sample	Male n (%)	Female n (%)	Arts n (%)	Science n (%)	1 n(%)	2 n(%)	3 n(%)	4 n(%)	5 n(%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Gender															
Male	20	50	-	-	10 (50)	10 (50)	7 (35)	5 (25)	3 (15)	2 (10)	3 (15)	8 (40)	12 (60)	5 (25)	15 (75)
Female	20	50	-	-	11 (55)	9 (45)	8 (40)	8 (40)	1 (5)	2 (10)	1 (5)	6 (30)	14 (70)	9 (45)	11 (55)
Subject taught															
Drama	10		3 (30)	7 (70)	-	-	5 (50)	4 (40)	1 (10)	0	0	-	-	-	-
Music	1		0	1 (100)	-	-	0	1 (100)	0	0	0	-	-	-	-
Art	2		2 (100)	0	-	-	0	1 (50)	0	0	1 (50)	-	-	-	-
RE	1		0	1 (100)	-	-	0	0	0	1 (100)	0	-	-	-	-
Geography	1		1 (100)	0	-	-	0	0	0	1 (100)	0	-	-	-	-
PE	2		1 (50)	1 (50)	-	-	0	2 (100)	0	0	0	-	-	-	-
Languages	3		2 (66)	1 (33)	-	-	0	2 (66.6)	0	0	1 (33.3)	-	-	-	-
Total "Arts"	21	52.5	10 (47)	11 (52.4)	-	-	5 (23.3)	10(47.6)	1 (4.7)	2 (9.5)	2 (9.5)	2 (9.5)	19 (90.5)	9 (42.8)	12(57.1)
Science	11		7 (63.6)	4 (36.4)	-	-	6 (54.5)	2 (18.1)	2 (18.1)	1 (9.1)	0	-	-	-	-
Maths	7		3 (42.9)	4 (57.1)	-	-	4 (57.1)	1 (14.3)	1 (14.3)	1 (14.3)	0	-	-	-	-
ICT	2		1 (50)	1 (50)	-	-	0	0	0	0	1 (100)	-	-	-	-
Total "Sciences"	19	47.5	10 (52.6)	9 (47.4)	-	-	10(52.6)	3 (15.7)	3 (15.7)	2 (10.5)	2 (10.5)	11(57.9)	8 (42.1)	5 (26.3)	14(73.7)
Teaching Life Phase															
1	15	37.5	7(46.6)	8 (53.3)	5 (33.3)	10 (66.6)	-	-	-	-	-	9 (60)	6 (40)	4 (26.6)	11 (73.3)
2	13	32.5	5 (38.5)	8 (61.5)	10 (76.9)	3 (23.1)	-	-	-	-	-	2 (15.4)	11 (84)	5 (38.4)	8 (61.5)
3	4	10	3 (75)	1 (25)	1 (25)	3 (75)	-	-	-	-	-	2 (50)	2 (50)	2 (50)	2 (50)
4	4	10	2 (50)	2 (50)	2 (50)	2(50)	-	-	-	-	-	0	4 (100)	2 (50)	2 (50)
5	4	10	3 (75)	1 (25)	2 (50)	2 (50)	-	-	-	-	-	1 (25)	3 (75)	1 (25)	3 (75)
Previous career															
Yes	14	35	8 (57)	6 (42.9)	2 (15.4)	11 (84.6)	9 (64)	2 (14.3)	2 (14.3)	0	1 (7.1)	-	-	4(28.6)	10(71.4)
No	26	65	12 (46.2)	14 (53.8)	19 (17.3)	8 (29.6)	6 (23)	11 (42)	2 (7.7)	4 (15.4)	3 (11.5)	-	-	10(38.5)	16(61.5)
Other pastoral responsibilities															
Yes	14	35	5 (35.7)	9 (64.3)	9 (64.3)	5 (35.7)	4(28.5)	5(35.7)	2(14.3)	2(14.3)	1 (7.1)	-	-	-	-
No	26	65	15 (57.7)	11 (42.3)	12 (46.2)	14 (53.8)	11(42.3)	8(30.7)	2 (7.7)	2 (7.7)	3 (11.5)	-	-	-	-

Table 4.1: Descriptives of questionnaire respondents
Source: Data extracted from questionnaires returned

The respondents average teaching experience was 13.7 years (SD=10.5), which equated to TLP2 of Sammons et al. (2007); the data being skewed towards the lower TLPs (1&2) (Figure 4.3).

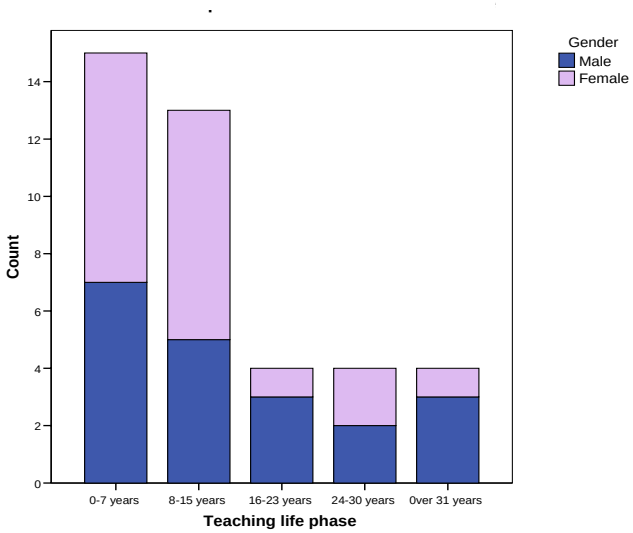


Figure 4.3: Numbers of questionnaire respondents within each Teaching Life Phase (TLP), distinguished by gender (n=40)
Source: Data extracted from questionnaires returned

Whilst this indicates a fairly consistent distribution between the genders, Table 4.1 indicates the 'arts' as modally TLP2 (47.6%) and 'sciences' TLP1 (52.6%).

35% (n=14) respondents had career experience prior to teaching (Figure 4.4), the majority of these are male and/or 'scientists', having pursued research-based (Biology/Chemistry teachers) or finance-based (Mathematicians/ICT teachers) careers and as such are typically in the beginning TLPs. Those having held blue-collar jobs noted these were typically short-term, pre-career decision posts.

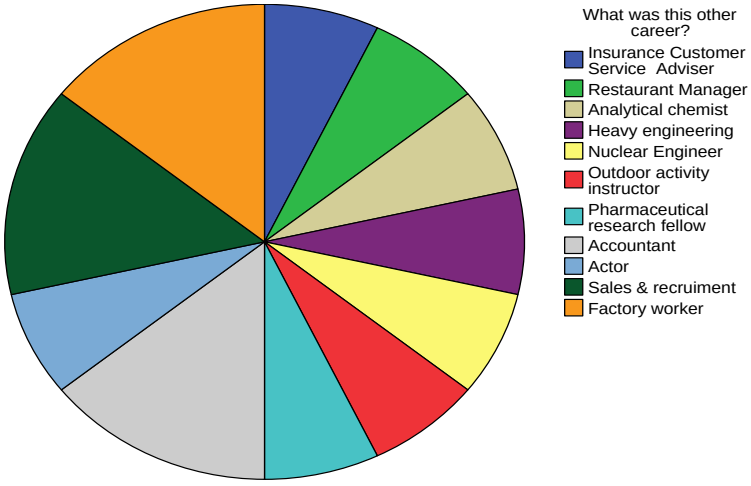


Figure 4.4: Details of respondents' previous career (where applicable) (n=14)
Source: Data extracted from questionnaires returned

The majority (65%, n=26) of respondents did not hold additional pastoral-responsibilities, however of the 14 teachers that did, typically Deputy/Assistant Heads or Form Teachers, 36% were male and 64% female (Figure 4.5). Distinction by subject area and TLP was comparable (Table 4.1).

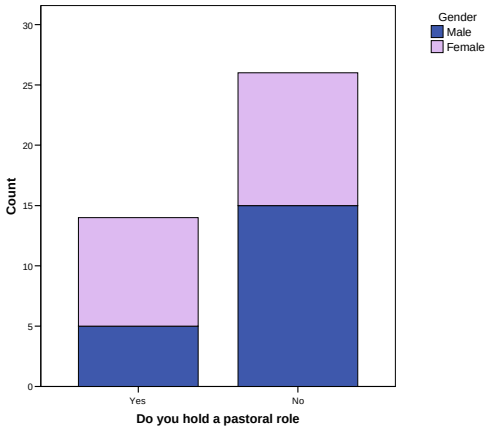


Figure 4.5: Numbers of questionnaire respondents holding additional pastoral roles, distinguished by gender (n=40)
Source: Data extracted from questionnaires returned

The interview participants' demographics are summarised in Table 4.2.

	Gender	Subject taught	Teaching Life Phase (TLP)	Previous career experience	Pastoral responsibilities
Participant 1	Female	PE	2	No	In charge of "Gifted & Talented"
Participant 2	Male	History	5	No	None
Participant 3	Female	Science (Biology)	2	Yes	Training Manager

Table 4.2: Demographics of interview participants

4.3.1 How is a teacher identity perceived represented?

Exploring the first research question, this section describes respondents' perceptions of their teacher identity in accordance with Bromme (1991)'s tri-part representation of subject matter, didactical and pedagogical expertise (see Chapter 2.5 for explanation and Table 3.1). Data presented extends prior work of Beijaard et al. (2000). Through consideration of possible relationships with the independent variables and observation of differences/similarities between the datasets acquired from different sub-groups, the importance of influencing factors is examined.

Whilst only 35% (n=14) of respondents perceived this tri-part representation entirely relevant, with the 27.5% (n=11) perceiving it "not relevant" having not previously considered the construct, this is an acceptable model for exploration and discussion. Such stance is corroborated by the interview participants', alternative nomenclature provided being related terminologies:

"*reflective practitioner*", "*commitment*", "*bond with pupils*"

Table 4.3 identifies the range of points allocated to each of the three elements of expertise.

Expertise	Range		Mean	SDev
	Minimum score	Maximum score		
Subject matter	20	70	36.84	10.51
Didactic	10	50	31.76	9.48
Pedagogic	10	50	30.94	9.22

Table 4.3: Descriptive statistics for the tri-part representations of teacher identity
Source: Data extracted from questionnaires returned

Despite this range however, all three convey a similar mean ($30.94 \geq M \leq 36.84$); a trend evidenced through graphical representation (Figure 4.6).

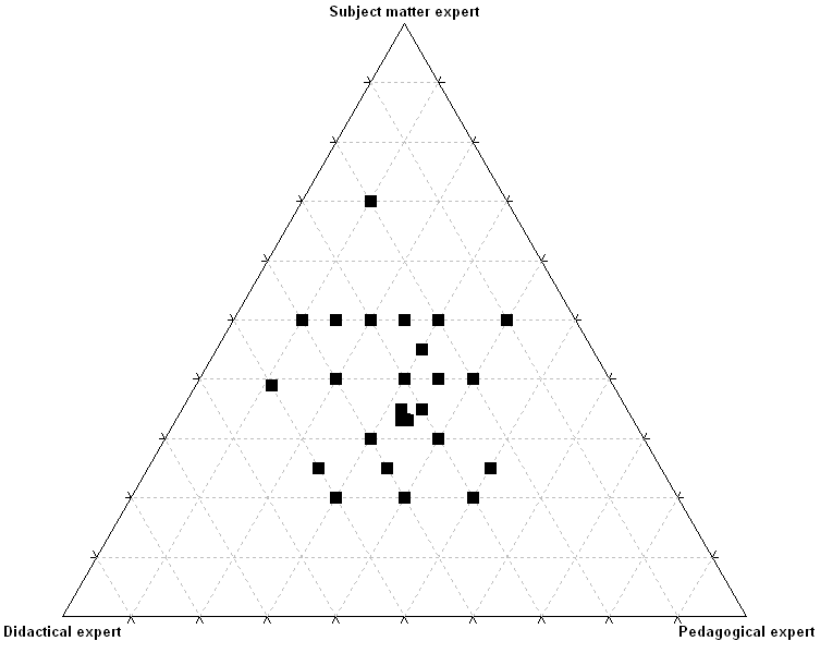


Figure 4.6: Perceived representations of teacher identity (n=40)
Source: Data extracted from questionnaires returned

Whilst demonstrating the combination of expertise that comprise teacher identity, initial observations indicates a central-tendency, eight respondents allocating essentially equal points to each element and a further eight allocating within $^{+/-}7$ of an equal split (26-40 points for each element). This might infer that most teachers perceive themselves as

experts across all three areas.

On the basis of point distribution using Beijaard et al. (2000), seven teacher identity groupings are distinguishable:

1. Scoring >45 on subject matter expertise
2. Scoring >45 on didactical expertise
3. Scoring >45 on pedagogical expertise
4. 'Balanced': scoring 26-40 for all elements
5. Scoring high (>40) on both subject and didactical
6. Scoring high (>40) on both subject and pedagogy
7. Scoring high (>40) on both didactical and pedagogy

Figure 4.7, illustrating the numbers of respondents within each grouping, confirms visual observations from Figure 4.6: 40% (n=16) representing their teacher identity as 'balanced' across the elements.

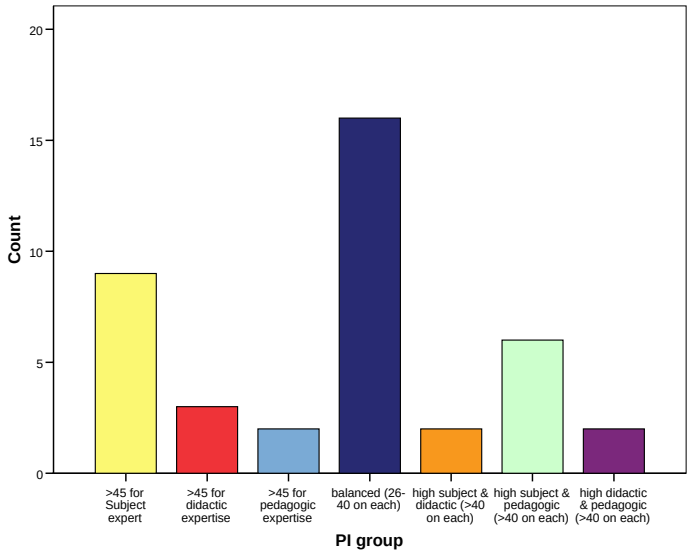


Figure 4.7: Representation of perceptions of teacher identity (n=40)
Source: Data extracted from questionnaires returned

Whist eliciting a diversity of responses as to why points had been so allocated, Table 4.4 adds credence to this inferential, respondents' idioms including:

"*no matter how high your level of subject knowledge, it is impossible to*

teach effectively unless you know how and what to teach and how to engage and inspire" (Questionnaire respondent 8)

"*all the subject knowledge in the world will have little influence on a pupil unless it is packaged in an accessible and interesting manner*" (Questionnaire respondent 25)

TEACHER IDENTITY REPRESENTATION Q2b. Why have you allocated the points in the way that you have?		
	Questionnaires	**Interviews**
TOTAL Nº. respondents/participants	40	3
Common Themes		
Equal importance	6	
Intrinsic interdependency of elements	7	
Traditional knowledge	4	1
'Security' (of personal knowledge)	3	1
Reflects my personal ethos	3	
Knowledge supports the other elements	12	1
Influence of other school responsibilities	4	
Delivery not knowledge is vital for learning	6	1
Area of expertise	2	
Self-evaluation	2	
Education in its 'widest' sense	4	1
Social & moral well-being of individuals	5	1
Rapport with pupils	2	
Subject commitment	2	

Table 4.4: Key themes emerging from responses to why teacher identity is so perceived: numbers of respondents/participants citing the theme identified
Source: Data extracted from questionnaires returned and interviews

As illustrated in Figures 4.6 and 4.7, of those not allocating equal points, weighting is towards subject matter expertise, a premise exemplified through scrutiny of the qualitative data (Table 4.4): 'knowledge supporting other elements' and 'security of personal knowledge' being notable themes:

"… *without this knowledge I am not the teacher I am*" (Questionnaire respondent 4)

"*I am perhaps old fashioned but I have attempted to maintain the concept of knowledge as being of paramount importance*" (Interview participant 2)

Whilst the two teachers asserting pedagogical expertise emphasised the importance of the pupil:

> "*a pupil who feels as if you value/care for them will have more success and achieve more for themselves*" (Questionnaire respondent 28);

the three noting a high didactic element suggested that:

> "*a teacher learns through self-evaluation to gain a better understanding of pupil's needs*" (Questionnaire respondent 6).

In contrast, the subject and didactical experts emphasised how:

> "*social, emotional, moral development are part and parcel of subject matter*" (Questionnaire respondent 16).

4.3.1.1 Influence of background variables on teacher identity representation

Considering the seven groupings by sub-group (background variables of gender, subject, TLP and pastoral role) (Table 4.5) specific, noticeable trends become apparent.

Whilst both males (30%, n=6) and females (50%, n=10) are modally 'balanced', males also indicate dominance towards subject expertise (n=5).

By subject-area, 'arts' are typically 'balanced' (52.3%), compared with 26.3% for 'science', the latter indicating a tendency to 'subject and pedagogic' expertise (31.6%) and 'subject' expertise (15.7%). With statistically confirmed differences between the subject-areas [$F_{10,98}$=2.96, p=0.09, E^2=0.10[13], 10% shared variance], this importance of 'subject' for 'scientists' is further illustrated through the qualitative data:

> "*the best Maths teachers know Maths*" (Questionnaire respondent 13);

whereas 'arts' cite awareness of the need to embrace 'the whole':

> "*teaching is more about the … pupils than it is the ability to use the latest up to the minute strategies*" (Questionnaire respondent 27).

[13]Cohen (1988) emphasises the value of "effect size" in place of statistical significance in exploratory research (see Chapter 3.9.2.2); this is the Eta squared (E^2) calculation

Group[¥]	Total		Subject area				Gender				Pastoral role				Teaching Life Phase (TLP)*									
			Arts		Science		Male		Female		Yes		No		1		2		3		4		5	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	9	22.5	6	28.5	3	15.7	5	25.0	4	20.0	4	28.6	5	19.2	4	26.6	3	23.0	1	25.0	1	25.0	1	25.0
2	3	7.5	1	4.8	2	10.5	1	5.0	2	10.0	2	14.3	2	7.6	2	13.3	1	7.7	0	0	1	25.0	1	25.0
3	2	5	0	0	2	10.5	1	5.0	1	5.0	0	0	2	7.6	2	13.3	0	0	0	0	0	0	0	0
4	16	40	11	52.3	5	26.3	6	30.0	10	50.0	4	28.6	12	46.2	4	26.6	6	46.2	2	50.0	1	25.0	2	50.0
5	2	5	1	4.8	1	5.3	1	5.0	1	5.0	1	7.1	1	3.8	1	6.7	1	7.7	0	0	0	0	0	0
6	6	15	0	0	6	31.6	4	20.0	2	10.0	1	7.1	4	15.4	2	13.3	2	15.3	0	0	1	25.0	0	0
7	2	5	2	9.5	0	0	2	10.0	0	0	2	14.3	0	0	0	0	0	0	1	25.0	0	0	0	0
N	**40**	**100**	**21**	**100**	**19**	**100**	**20**	**100**	**20**	**100**	**14**	**100**	**26**	**100**	**15**	**100**	**13**	**100**	**4**	**100**	**4**	**100**	**4**	**100**

Table 4.5: Teacher identity representation by sub-groups
Source: Extracted from data acquired through questionnaire survey

[¥]Groups:

1 Subject matter expert
2 Didactical expert
3 Pedagogical expert
4 'Balanced'
5 Subject and didactic expert
6 Subject and pedagogic expert
7 Didactic and pedagogic expert

***** TLP as defined by Sammons et al. (2007)

Table 4.5 additionally indicates the importance of TLP upon identity representation, an observation corroborated both statistically [$F_{10,98}$=2.96, p=0.09, E^2=0.11, 11% shared variance] and through qualitative observations. Suggesting that TLP1 respondents are typically 'subject' or 'balanced', these teachers appear to grasp at subject knowledge for 'security'

> "*it is vital to ensure you feel secure in passing knowledge on*" (Questionnaire respondent 2).

The relative importance of 'subject' decreases through TLP, becoming increasingly 'balanced'; those with more experience typically emphasising the importance of 'self-evaluation', 'reflection' and 'wider role of education' (Table 4.4).

The relevance of teachers having pastoral responsibilities is also evident. Although not supported statistically [$F_{0.2,124}$=0.081, p=0.77, E^2=0.002, 0.2% shared variance], these respondents are typically more 'didactic' and 'pedagogic', one Deputy Head (Pastoral) noting how

> "*subject matter is less important … the other two* [pedagogic and didactic] *... you cannot have one without the other*" (Questionnaire respondent 23).

Tentative links can be made through consideration of why respondents took up the profession (Table 4.6). Those citing a '*love for their subject*' typically demonstrate 'subject' dominance (groups 1, 4, 5, 6), whereas those citing their desire to '*make a difference*' and '*their vocation*' are characteristically 'balanced' (group 4).

PROFESSIONAL IDENTITY REPRESENTATION		
Q3a. What were the main reasons for you choosing to become a teacher?		
	Questionnaires	**Interviews**
TOTAL Nº. respondents/participants	40	3
Common Themes		
Love of their subject	13	2
Vocation	4	1
To help children and their future: to 'make a difference'	21	1
Inspirational role model	1	1
Enjoyment of children's company	9	1
To help improve my subject's status in schools	1	
By 'default'/peer pressure	5	
To perpetuate the learning process	7	
Career that fitted my personal life/needs	6	1
Love of the 'unknown' – no day is the same	2	
Satisfaction	1	

Table 4.6: Key themes emerging from responses to why respondents choose to become a teacher: numbers of respondents/participants citing the theme identified
Source: Data extracted from questionnaires returned and interviews

4.3.2 Importance placed upon teacher identity and group identification

Having considered perceptions of teacher identity representation, this section explores its importance through assessment of strength of group identification. Measured through the semantic attitudinal scale (referred to as PI index), developed by Brown et al. (1986) and demonstrated to be internally reliable (α=0.76; Chapter 3.9.1), enables its adoption as the dependent variable (DV) for analysis. Influencing factors derived from the academic framework with potential to explain variations in this DV are examined.

With both questionnaire and interview respondents/participants sub-consciously signalling professional allegiance:

> "*as teachers we* ..." (eg. Interview participant 2; Questionnaire respondent 32),

as shown in Table 4.7 and Figure 4.8, the mean score for all respondents was calculated as M=45.08 (SD=2.87).

	Professional identity scale		ECM scale		IPW/L scale	
	Mean PI score (M)	**Standard Deviation (SD)**	**Mean ECM score (M)**	**Standard Deviation (SD)**	**Mean IPW/L score (M)**	**Standard Deviation (SD)**
Whole sample	45.08	2.87	22.75	4.67	11.53	2.85
Gender						
Male	45.60	2.48	22.15	5.14	12.50	2.52
Female	44.55	3.19	23.35	4.20	10.55	2.87
Subject area						
Arts	44.85	2.60	23.45	5.50	11.25	2.94
Sciences	45.30	3.16	22.05	3.68	11.80	2.80
Life Phase						
1	44.47	3.23	20.47	3.52	11.53	2.80
2	44.77	2.77	24.08	4.50	11.69	2.43
3	46.50	1.91	25.00	6.38	11.00	4.08
4	45.60	3.00	26.50	4.93	11.75	3.30
5	46.50	2.65	21.00	4.08	11.25	4.11
Previous career						
Yes	44.71	2.92	22.57	3.46	12.43	2.90
No	45.27	2.88	22.85	5.27	11.04	2.75

Table 4.7: Central tendency metrics for index scale scores by sub-groups
Source: Data extracted from the questionnaire survey

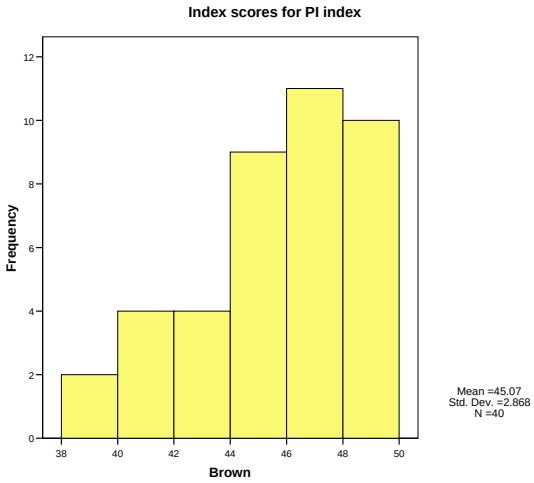


Figure 4.8: Frequency of scores accrued for PI index (N=40)
Source: Data extracted from the questionnaires returned

The causative importance of each IV, to the PI scores, is illustrated in Figure 4.9 and Table 4.7. These highlight how males (M=45.60, SD=2.48) (Figure 4.9a), 'scientists' (M=45.30, SD=3.16) (Figure 4.9b), in TLP3 (M=46.50, SD=1.91) and TLP5 (M=44.0, SD=2.65) (Figure 4.9c), with no previous career (M=45.27, SD=2.88) (Figure 4.9d) whilst not necessarily securing the highest recorded score, register the highest mean scores, indicating greatest strength of group identification.

Whilst Table 4.8 indicates that there is no significant difference between the means of the data sets ($p>0.05$ for all IVs), these influencing factors account for 12% of the variance in PI score; TLP making the greatest contribution ($\beta=0.26$) (Appendix 7c): as TLP increases so does strength of identity.

	t	F	df	Sig. (2-tailed, p)	E^2
Gender	-0.58	-	38	0.57	0.03
Subject area	-0.49	-	38	0.63	0.008
Previous career	-0.58	-	38	0.57	0.009
Teaching Life Phase	-	0.70	-	0.60	-

Table 4.8: Statistical results for t-test/ANOVA with IVs for PI index[14]

Source: Data extracted from questionnaires returned and statistically analysed using SPSSv14.0 (Appendix 7a & 7b)

[14]see Table 3.7 for further detailed explanation of this dataset

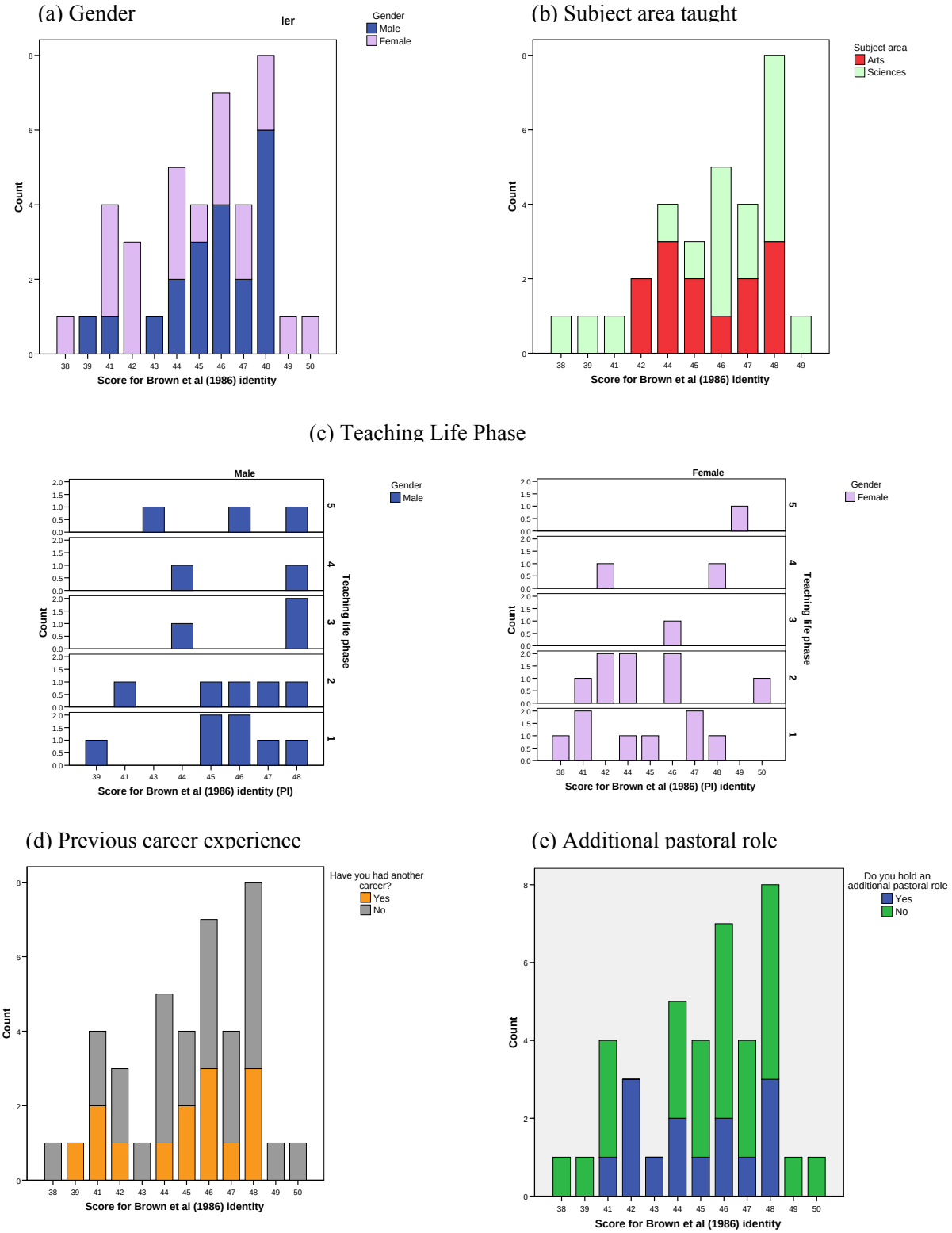


Figure 4.9: PI scale index scores by sub-groups (N=40)
Source: Data extracted from the questionnaires returned

There are no apparent trends relating to teachers' additional pastoral roles, Figure 4.9e illustrating the spread across the scores; those without an additional role recording both lowest and highest.

Relating PI to teacher identity representation, Table 4.9 indicates that 'subject experts', typically 'scientists', record a higher PI score (M=46.0, SD=2.06) than those with a 'balanced' representation (M=43.8, SD=3.77).

	PI index score											
	38	**39**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
>45 for Subject	0	0	0	0	0	3	1	0	3	2	0	0
>45 for didactic	0	0	1	0	0	1	0	0	0	1	0	0
>45 for pedagogic	0	0	0	0	0	0	0	1	1	0	0	0
balanced	1	1	3	3	1	0	1	2	0	2	1	1
high subject & didactic	0	0	0	0	0	1	1	0	0	0	0	0
high subject & pedagogic	0	1	0	0	0	0	1	3	0	1	0	0
high didactic & pedagogic	0	0	0	0	0	0	0	1	0	1	0	0

Table 4.9: Teacher identity representation & PI index scores
Source: Data extracted from questionnaires returned

4.3.3 Teachers' perceptions of the *ECM* imperative for inter-professionalism

Seeking to respond to the second research question, the implications of teacher identity for *ECM*'s inter-professionalism imperative, this section considers the findings derived from two components of data: the 11-question attitudinal scale to ascertain teachers' perceptions of *ECM* (ECM) and the 6-question scale to determine teachers' attitudes to inter-professional working/learning (IPW/L). Demonstrated to be internally reliable (ECM α=0.75; IPW/L α=0.74) (see Chapter 3.9.1), these indexes are used as DVs with selected IVs; they are considered consecutively.

As stated in Table 4.7 and illustrated in Figure 4.10, the ECM index scores, ranging from 14 to 33 (SD=4.67), are normally distributed about the mean, which is calculated as M=22.75.

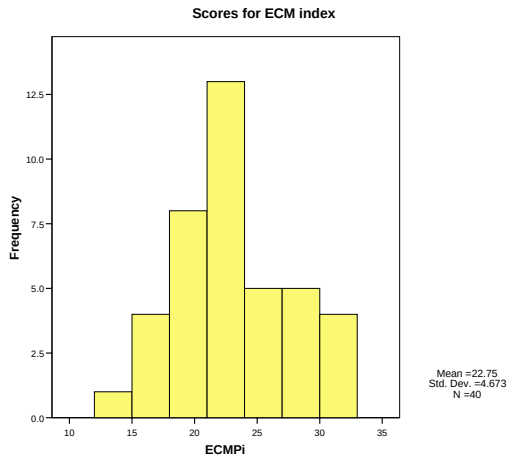


Figure 4.10: Frequency of scores accrued for ECM scale (N=40)
Source: Data extracted from the questionnaires returned

The causative importance of each IV upon the ECM scores is illustrated in Figure 4.11 and Table 4.10. Whilst not statistically significant ($p>0.05$ for all variables), the lowest mean score, indicated by a trend towards the left of the graphs, and thus the most receptive of *ECM* are typically male (M=22.15, SD=5.14) (Figure 4.11a), 'science' (M=22.05, SD=3.68) (Figure 4.11b), beginning and experienced teachers (TLP1: M=20.47, SD=3.52; TLP5: M=21.0, SD=4.08) (Figure 4.11c). Both previous career experience (Figure 4.11d) and pastoral role (Figure 4.11e) show little association, showing a spread across the scores and recording both the lowest and highest.

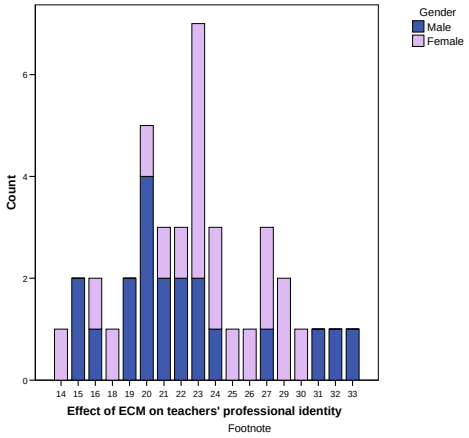
	t	F	df	Sig. (2-tailed, p)
Gender	-0.81	-	38	0.42
Subject area	0.95	-	33.61	0.35
Previous career	-0.20	-	36.3	0.84
Teaching Life Phase	-	$2.51_{(F_{189,661})}$	-	0.06

Table 4.10: Statistical results for t-test/ANOVA with IVs for ECM index [15]

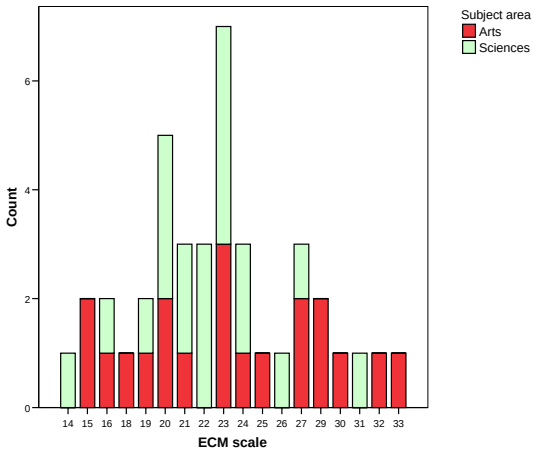
Source: Data extracted from questionnaires returned and statistically analysed using SPSSv14.0 (Appendix 7a & 7b)

[15] see Table 3.7 for further detailed explanation of this dataset

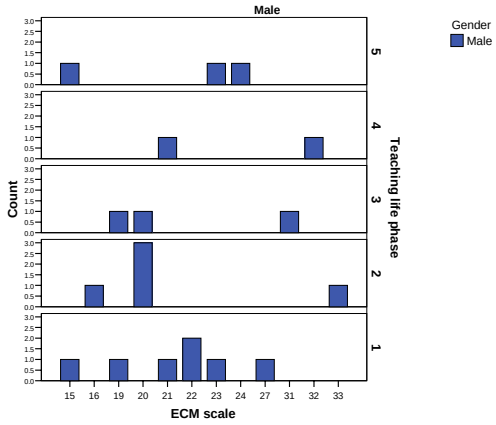
(a) Gender

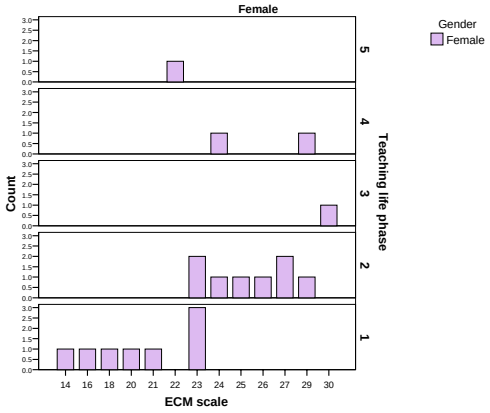


(b) Subject area

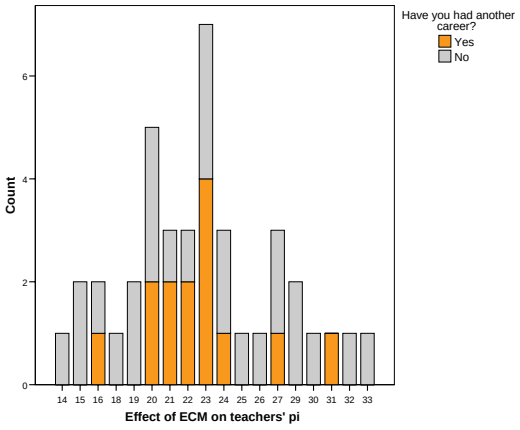


(c) Teaching Life Phase





(d) Previous career experience



(e) Pastoral role

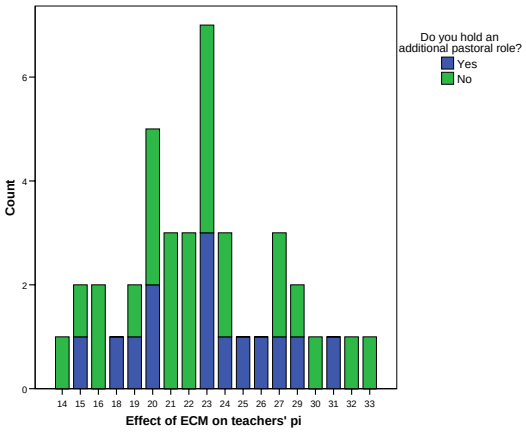


Figure 4.11: ECM scale index scores by sub-groups (N=40)
Source: Data extracted from the questionnaires returned

These variables account for 15.3% of the variance in ECM score; as with PI scale, TLP makes the greatest, significant contribution (β=0.32, significant at 10% level) (Appendix 7c): as TLP increases so reception of *ECM* decreases.

Figure 4.12 and Table 4.7 illustrate the range of scores (range=10) attained for the IPW/L scale. Questionably a normal distribution, the mean, calculated as 11.53 (SD=2.85), also approximates to the modal score.

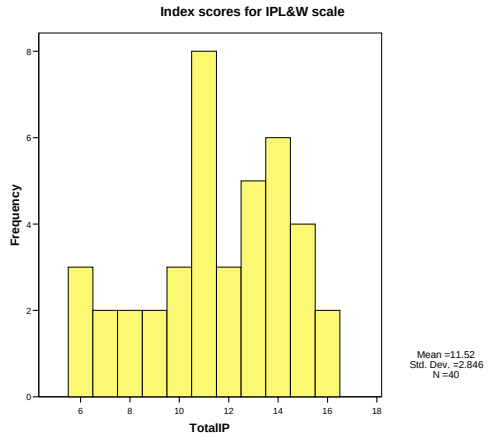


Figure 4.12: IPW/L scale index scores (N=40)
Source: Data extracted from questionnaires returned

With Figure 4.12 suggesting the possible influence of two sub-groups, indicated by two 'peaks' in the data, Figure 4.13 and Tables 4.7 and 4.11 indicate the causative importance of each IV upon the IPW/L scores.

	t	F	df	Sig. (2-tailed, p)
Gender	2.28	-	38	0.02
Subject area	-0.61	-	38	0.55
Previous career	1.49	-	38	0.14
Teaching Life Phase	-	0.05($F_{1,314}$)	-	0.99

Table 4.11: Statistical results for t-test/ANOVA with IVs for IPW/L index[16]

Source: Data extracted from questionnaires returned & statistically analysed using SPSSv14.0 (Appendix 7a & 7b)

[16]see Table 3.7 for further detailed explanation of this dataset

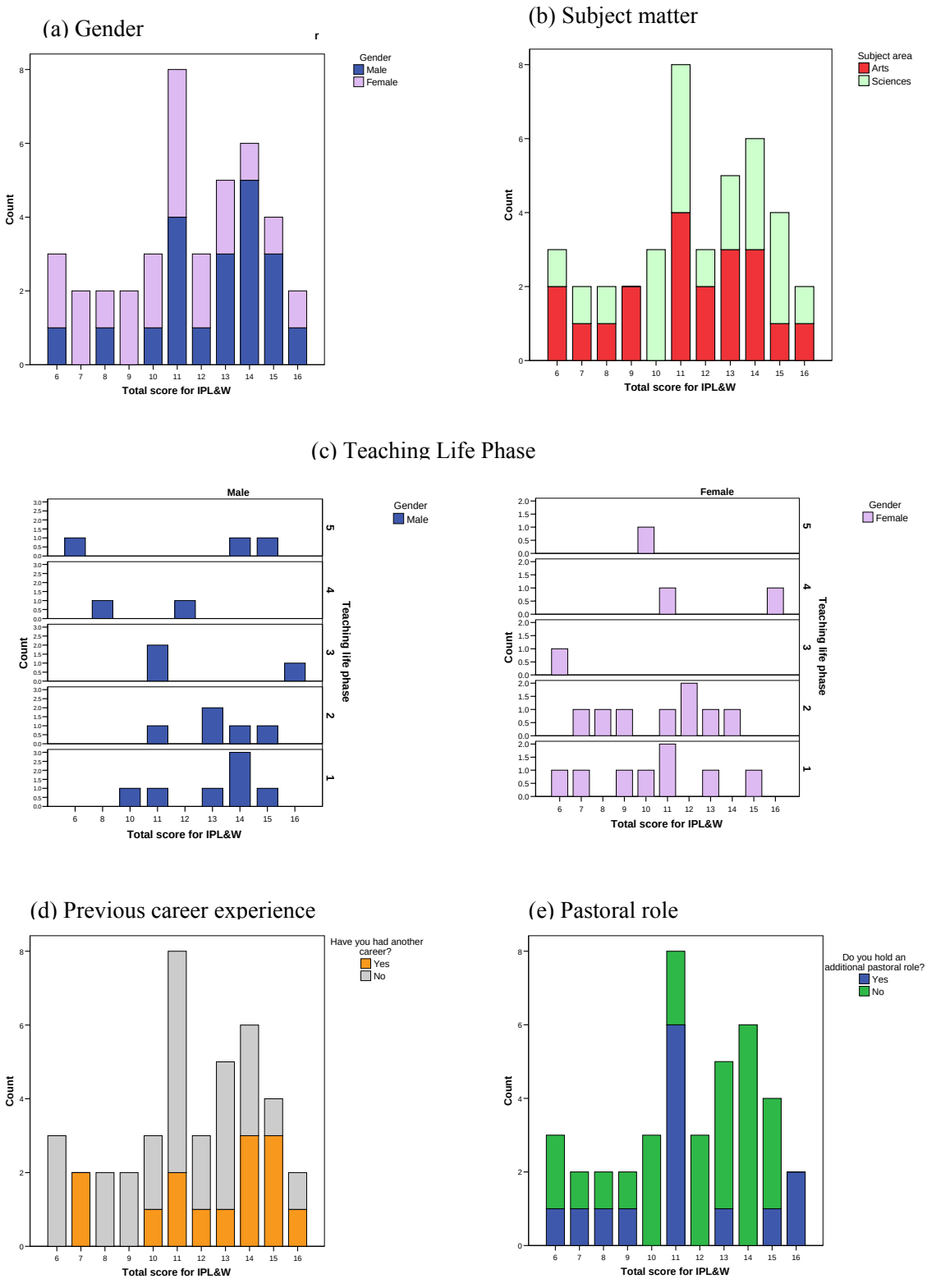


Figure 4.13: IPW/L scale index scores by sub-groups (N=40)
Source: Data extracted from the questionnaires returned

The lowest mean score, a trend to the left-side of the graphs, of 10.55, thus most open to IPW/L (Table 4.7) is recorded by females (Figure 4.13a), a difference that is statistically significant (t=2.28, p=0.02) (Table 4.11), 'arts' (M=11.25, 2.94) (Figure 4.13b), with no previous career experience (M=11.04, SD=2.75) (Figure 4.13d). There is however no apparent trend with TLP (Figure 4.13c) which reveals a range of only 0.75 between the highest in TLP4 (M=11.75) and lowest in TLP2 (M=10.93) and a SD of up to 4.08 or pastoral role (Figure 4.13e).

Overall, these variables account for 26% of the variance in score, gender making the greatest contribution (β=0.49. p=0.01); males being less open to IPW/L (Appendix 7c).

Despite an observable positive relationship between the two scales (r=0.23, p=0.16) (Appendix 7d), such that teachers more receptive of *ECM* are more open to IPW/L, these results, especially for gender, appear antithetical. MANOVA statistics however confirmed the value of gender in explaining the index scores (Appendix 7e), significance further illustrated by the qualitative data:

> "*ECM … it will not radically change our lives*" (Questionnaire respondent 23, Male)
>
> "*I am a big fan of collaboration*" (Questionnaire respondent 8, Female)

Additionally a male interview respondent was very negative about *ECM*. His responses and tone throughout indicating how, until recently, teaching 'had been his life', but he now felt unhappy in admitting he was a teacher. Whilst he did perceive the value of inter-professional working for the sake of the child, it was evident that he did not feel this was his responsibility.

In considering teachers' acceptance of the inter-professional imperative, to provide further biographical detail to explain the data, the questionnaire sought to ascertain why the teachers took up the profession (Table 4.6). Comparing those 'defaulting' into teaching (n=5) with those who saw it as their 'vocation' (n=5) indicates the latter having a greater PI (M=45.4, *cf* M=41.6 for the 'defaulters') and less receptive of *ECM* (M=32.4, *cf* M=30.0); in contrast, they have greater openness to IPW/L (M=20.2, *cf* M=21.2).

To gauge possible apprehension of change, respondents rated their level of satisfaction

with their work; as Figure 4.14 indicates, 95% cited are 'satisfied'/'very satisfied'.

Figure 4.14: Respondents' satisfaction with their work (N=40)
Source: Data extracted from the questionnaires returned

Throughout the research, only one teacher cited any lack of satisfaction (Interview participant 2) (data not recorded in Figure 4.14).

4.3.4 Further indicators of the implications of teacher identity for inter-professional working

Further indications of the implications of teachers identity for inter-professionalism considers the relationship between their strength of identity (PI) and the other two scales (Table 4.12).

		PI	ECM	IPW/L
PI	**r**	-	0.14	-0.02
	p	-	0.38	0.91
ECM	**R**	0.14	-	0.23
	P	0.38	-	0.16
IPW/L	**r**	-0.02	0.23	-
	p	0.91	0.16	-

Table 4.12: Bivariate correlations between the DV of PI and the other scales
Source: Data extracted from questionnaires and subjected to analysis through SPSSv14 (Appendix 7d)

Whilst only very weak and tentative, it might be inferred that, as teachers' strength of identity (PI) increases so they become less receptive of *ECM* and inter-professional

working/learning. Such is especially the case for those with both previous career experience and in their early TLP (Appendix 7d).

To supplement this data collated from the indexes, the research explored further indicators of the importance of teacher identity for inter-professionalism: questions relating to perceived future changes. 70% (n=28) did not perceive that teacher identity representation might change over the next five years; only three respondents expect to act as a player within a wider trans-professional context, one stating how they believed teachers were to

> "*become follower*[s] *rather than leader*[s]" (Questionnaire respondent 37).

Reasoning for this focussed upon the belief that the principles of *ECM* were already being delivered (n=9, 22.5%):

> "*the changes are only cosmetic*" (Questionnaire respondent 25)
>
> "*ECM ideals are not new to us* [arts] *– but they will be to the scientists and mathematicians*" (said with a chuckle!) (Interview participant 1);

ECM is solely working to formalise

> "*an aspect of teaching which some could previously ignore*" (Questionnaire respondent 37).

However, a key signal of resistance was provided by Interview participant 2, stating how he, as with much of his generation, was

> "*thoroughly disillusioned with the way that the profession has deteriorated*";

deterioration he attributed to

> "*political expediency*"

and the Government

> "*rid*[ing] *rough-shod over those who know the job: its problems and enjoyment*".

Analysis of the qualitative data deciphered the key themes relating to the teachers' experiences of the *ECM* agenda within their school context. As Table 4.13 indicates, these emphasised, possibly justified, their working with other professionals both within and external to the classroom. Of significance, possibly concern, three questionnaire respondents suggested the documentation had not actively been brought into practice or was not viewed as important within their school.

EXPERIENCES OF *ECM* AGENDA IN SCHOOLS	**Questionnaires**	**Interviews**
TOTAL Nº. respondents/participants	40	3
Common Themes		
Role of designated teachers	1	2
Always been the practice – just formalised	2	1
Not considered within the school	2	
We have always worked with other professionals outside of teaching	2	1
Always had support (paraprofessionals) in the classroom when it was needed		3
We have always had a larger role than just being a teacher	1	3

Table 4.13: Key themes emerging from experiences of *ECM*: numbers of respondents/participants citing the theme identified
Source: Data extracted from questionnaires returned and interviews

Further exploration, through interview, of this notion of working with paraprofessionals and other professional groups cited a general feeling that

> "*I have always worked with classroom assistants; I can't see why this will be any different ... It is just another pressure on me, another person to worry about*" (Interview participant 2)

However professional stereotyping was evident, reflecting perhaps further their feelings about inter-professionalism:

> "*What do they* [social workers] *know about what I do ... I am not sure why they would want to anyway*" (Interview participant 2, [verbal emphasis])

Through consideration of the potential value of an integrated framework of professional standards, the interview participants were in universal vehement agreement, perceiving

such to be inappropriate and valueless for all professions involved.

4.4 Summary

This Chapter, which describes the research findings from both the questionnaire survey and the case-study interviews, illustrates the complexities of the research topic: perceptions of teacher identity representation and its implications for the adoption of inter-professional working-practices.

The following key findings can be identified across the two research phases:

i. 'Arts' typically indicate a 'balanced' identity representation whereas 'scientists' are typically 'subject experts';
ii. Beginning teachers are typically 'subject' or 'balanced'; with experience representations become increasingly 'balanced';
iii. Subject experts, whom are typically male, have a greater strength of identity and are more reticent of inter-professionalism than those with a 'balanced' identity;
iv. Experience (TLP) has the greatest influence upon strength of identity; those in later stages demonstrating greater strength of identity and decreasing openness to inter-professionalism;
v. Gender has the greatest influence upon openness to IPW/L;
vi. Respondents more positive towards *ECM* are typically more open to IPW/L;
vii. Male scientists in mid/later-TLP, many of whom are subject experts, typically demonstrate a greater strength of identity and a greater resistance to the ideals and practices associated with *ECM*;
viii. Respondents with pastoral roles typically demonstrate a below-average strength of identity and greater openness to IPW/L

The following chapter will analyse and interpret these findings in accordance with the conceptual framework outlined in Chapter 2.

Chapter 5: Discussion of the Findings and Conclusions

"*Now is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning*"

(Winston Churchill, Prime Minister on the Battle of Egypt 1942)

5.1 Introduction

This Chapter focuses upon the research findings described in Chapter 4. Initially, in appraising the value of the study and thus the credibility of the results obtained, a critical evaluation of the methodology adopted is articulated. This considers the appropriateness of the methods and how, in hindsight, future research might be better approached.

Focus then shifts to explaining and interpreting the findings, contextualising these within the conceptual framework presented in Chapter 2. Observing that, analogous with previous research, teacher identity is perceived represented in different ways, the importance of influencing factors upon this, also upon the strength of identity and perceptions of inter-professionalism, are acknowledged. Whilst all respondents demonstrate considerable strength of teacher identity, experienced, male science teachers demonstrate these characteristics most strongly. Such observations have significance for the successful implementation of *ECM* and the facilitation of inter-professionalism, the facet upon which reflection is then made.

Conclusions are drawn regarding the limitations of the research and a personal reflection encapsulated. Finally the implications of this study in furthering understanding within this research field are considered.

5.2 Critical evaluation of the adopted methodology

This study has sought to examine the radical change in public service delivery in England and Wales, wrought through the Government-imposed *ECM* agenda, through the lens of teacher identity.

With the academic literature within this research area ever-growing, much published since the instigation of this research, it is intended that this work augments this; aiding increased understanding of the rhetoric, enabling more effective facilitation.

5.2.1 Appropriateness of the methodology

Initiated through exploration of existing theory, this research area lends itself to interpretation from numerous discourses: SIT (Tajfel & Turner 2001), change theory, psychodynamics (Horowitz 2001), complexity theory (Morrison 2002), AT (Engestrom 1989, 1987) and CoPs (Brown & Duguid 1991; Lave & Wenger 1991). Whilst such range provides considerable breadth of scope for the researcher to pursue in interpreting the data, it is SIT, explaining how teacher identity, created through socio-interactions within the profession instigates inter-professional/group discrimination, that the researcher has employed as the central framework; complexity theory may however be viewed concomitantly with this.

Recent research has additionally instilled the value of AT and CoPs for understanding inter-professional working (eg. Daniels et al. 2004). Whilst some cast doubt on their relevance in educational change/decision-making (eg. Blackmore 2008), the researcher hypothesises that, although epistemologically divergent, in conjunction with SIT this provides a means of conceptualising the developments necessary for inter-professionalism: the "boundary object" and tools for learning, around which practice can be reconfigured. As such this affords a useful heuristic to the research.

The abductive approach adopted has enabled the acquisition of methodologically-triangulated empirical data. As such, the eclectic, methodological synergy has enabled, for the survey size, a relative richness of data to be acquired which, whilst negating validation, has elicited findings relevant to future research; this should be seen as its greatest strength.

5.2.2 Appropriateness of the methods

With methodological rigour an intended feature of the research, the techniques adopted were appropriate to such in-depth, small-scale exploration.

Adopting a sequential, mixed methods approach the research sought to map, through means of electronically-dispatched questionnaires, perceptions of teacher identity and

the implications of this for *ECM*'s inter-professionalism imperative. Preliminary analysis informed subsequent case-study interviews which, whilst proving problematic in application (Chapter 5.5), provided an invaluable means of securing greater understanding.

Precluding method-boundedness, this approach enabled the researcher to develop the research along lines appropriate to the research question and conceptual framework. Employing a predominantly quantitative approach, authenticated through supplementary qualitative data, reduced the time-consuming processing of analysing solely qualitative data.

5.3 Discussion of and Conclusions about the Research Objectives

Being small-scale and abductive, the generalisability of these findings is limited. With identification of the respondents/participants guided by the researchers' workplace connections, it cannot be professed that their perceptions represent the entire population of secondary teachers within England and Wales. The findings do however provide further insight into an area of research in which empirical data is currently lacking and which is, consequential of identity's tendency to increase resistance (Geijsel & Meijers 2005), deemed to be of significance during educational reform (eg. Beijaard et al. 2000).

With academic theory (Figure 5.1) intimating how teacher identity is constructed consequential of influencing factors comprising the "teaching landscape" (Reynold 1996) these are considered through analysis and subsequently reported. Since teacher identity is perceived to acquiesce both agency and structure such that "in their own terms they 'become' teachers: … often to occupy their sleeping as well as their waking hours" (Nias 1989:152), implications for teachers *per se* are inexorably considered as implications for teacher identity.

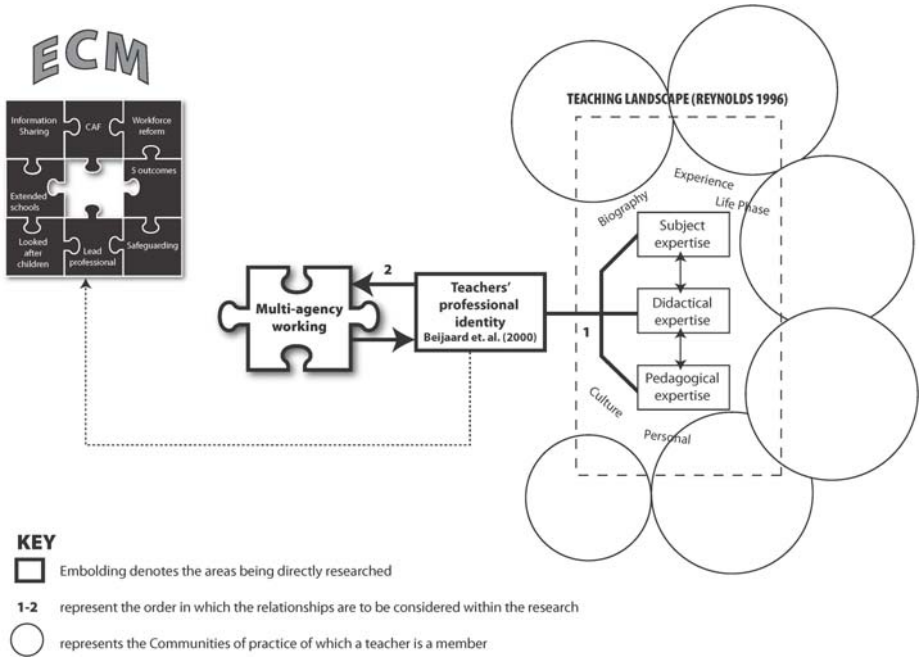


Figure 5.1: Conceptual Model for Research (developed in Chapter 2)

5.3.1 Representation of teacher identity

Detailed in Chapter 2 and illustrated within the conceptual model (Figure 5.1), Bromme (1991) suggests teacher identity has a tri-part representation comprising: subject, pedagogic and didactic expertise (Beijaard et al. 2000). Whilst cognisant that some teachers did not consider this representation entirely relevant affirming identity's gestalt nature and despite post-structuralist assertions (eg Stronach et al. 2002) that ever-shifting discourses have striped teachers of an identity, these elements are appropriate for consideration and as such the findings identify seven teacher identity groupings.

Whilst generally tending towards a balance of the three elements, teacher identity representation varies (suggesting the tri-elements in Figure 5.1 should be of differing sizes to signify the differing values). Although with to the paucity of sample-size it is not possible to draw irrefutable conclusions, the importance of influencing factors (biography, subject and experiences) (eg. Kelchtermans 1993; Knowles 1992) upon perceptions of teacher identity are significant.

Analogous with Beijaard et al (2000), 'arts' typically see themselves 'balanced', whilst 'scientists' are typically 'subject experts'. Thus, whilst the other areas are increasingly prioritised, subject remains the crux of 'science' teachers' repertoire

(Hoyle & John 1995), consequential possibly of the subjects' relatively deductive and explanatory characteristics compared with, for example, drama, this is further confirmed through interview. Whilst there is no evidence to support notions that teachers of low status subjects situate their identity within general rather than subject skills (Paechter & Head 1996), these teachers all highlight the value of pedagogy and didactical expertise.

Gender, although not directly illustrated within Figure 5.1, is identified as of paramount importance: whilst females are typically 'balanced', males show subject-dominance. Whilst such observations may be attributable to the slightly greater proportion of males being scientists, however they are consistent with Beijaard's work.

Subject-dominance can also be ascribed to those citing their reason for teaching to be their love of their subject; those citing a desire to '*make a difference*' indicate a more 'balanced' identity, highlighting their appreciation of the wider education needed to 'make this difference'. However, with such responses possibly being socially desirable, subject-dominance may be better attributed other factors.

Such can be explicated through consideration of teaching experience. With research demonstrating how teacher identity changes over career time (eg. Huberman 1993; Bloom 1988), the findings typically indicate beginning teachers (TLP1), whilst trained in pedagogy and evaluation as a requirement for QTS (DfES 2006a), grasping the 'security' of subject knowledge. Contrastingly, those with greater experience exemplify greater 'balance', affirming their greater confidence in placing importance upon self-evaluation and wider education. Such trends, whilst contradictory to Sikes et al. (1996) who suggest that experienced teachers find the esteem of their subject more important, corroborate the work of Knowles (1992) and Beijaard et al. (2004, 2000, 1995) who demonstrate a shift from subject-dominance towards didactics and pedagogy as teachers build upon their practical knowledge. Although the findings suggest a later decreasing pedagogy, corroborating Bloom (1988)'s cynicism of teachers increasingly loosing commitment and dedication to the pupils, with the very small number of respondents in the later phases, such observation should be considered assiduously.

The importance of pastoral roles is portrayed through greater predominance of 'pedagogy' and 'didacticism'. Whilst unsupported by research evidence, this may be attributable to these teachers having a wider educational role. Although neither 'pedagogical expert' holds a pastoral role both are academic managers with previous management careers, areas within which such skills are unquestionably important.

Whilst academically valuable in its elucidations alone, these trends in teacher identity representation have practical implications for teachers' acceptance of *ECM*. Being in tension with their subject demands, it might be suggested that teachers with strong subject-allegiance be less accepting of the demands of inter-professionalism. Such hypothesis is supported through Beijaard (1992, in Beijaard 1995) demonstrating how, in perceiving their subject threatened, teachers develop negative identity perceptions. Thus erosion of their 'subject' risking clarity in teacher identity, may with limited support, engender a lack of understanding (eg. Dobrow & Higgins 2005) and resistance.

Intrinsically related, teachers identity is key to their emotional behaviour (Zembylas 2003) and commitment (Day et al. 2007a, 2006a,b). Being "motivated not by directives … but by moral commitment to the children" (Greenfield 1991), this creates a further shield for misunderstanding and intolerance to change (Fullen 2004; Pennington 2003).

These hypotheses will be considered further in exploring the importance placed upon teacher identity; also teachers' perceptions of *ECM* and inter-professional working/learning.

5.3.2 Importance placed upon teacher identity and group identification

Whilst teachers show differing degrees of 'identification' (Maclean & White 2007), the mean index recorded, lies well above the level documented in the scale's development (Brown et al. 1986) and in subsequent research: health professionals for example, indicating a range of 42.9 to 38.7 (Hind et al. 2003). This is however consistent with the documented strength of teacher identity (eg. Nias 1989) and may, with SIT theorising that group identification is typically stronger in periods of 'conflict', be attributable to teachers feeling 'threatened' by *ECM*. With inter-group attitudes being determined through the strength of identity (eg. Adams et al. 2006),

such observations have potentially significant implications for inter-professionalism. If strength of identity increases teachers' professional closure, the likelihood of new common-practices being developed will be undoubtedly weakened.

With the findings indicating the greatest strength of teacher identity to be exhibited by males, scientists in TLP3 or TLP5, phases of career stagnation (Sammons et al. 2007), these teacher-groups should perhaps be the focus of managements' consideration, especially since they are typically the most influential within schools (Sikes 1996). Corroborating the findings instituted through teacher identity representation where male scientists typically have a stronger subject-dominance, their embracement of *ECM*'s ideals that risk compromising this may be expected diminutive. Such inference is supported through consideration of relationships between strength of teacher identity and perceptions of *ECM*. This is explored in Chapter 5.3.3.

5.3.3 Teachers' perceptions of *ECM* and inter-professional working

With inter-professional working/learning being key to the successful integration of *ECM* (eg. DfES 2007a, 2004a,b, 2003), initial findings suggest that experienced, male scientists, having the greatest strength of group identification and being typically subject-dominant, will be the least receptive to this. Such notion is further confirmed through the IPW/L index where these sub-groups demonstrate greater professional closure. Closure may, in the case of 'scientists', be partially explained by imposed subject stereotyping (Luehmann 2007; Volkman & Anderson 1998), causing these teachers to adopt more 'defensive' attitudes. In a climate of continuously defending their subject, it is inevitable that they also defend it against *ECM*.

Whilst, due to apparent inconsistencies, the value attributable to the ECM index may be questioned, occurrences of socially desirable responses being cited, credibility in other of its findings, is secured through indications that those with career experience outside of teaching have lesser strength of identity and are more positive towards *ECM*. However, whilst the conjecture might therefore have been for these individuals to perceive IPW/L more positively, this is not apparent. Although not validated, this may be attributable to these individuals being practitioner 'scientists' (research, nuclear-engineer, business analyst/accountant) or having had careers (eg Sales) in which the pitfalls of poor teamwork communication are paramount.

With research indicating that "experienced teachers become fatalistic ... younger teachers … are more instrumental and flexible in outlook" (Horne 2001:10) towards change, it might have been expected that TLP1&2 be more receptive to the concepts of imposed inter-professionalism (eg. Norrie & Goodson 2007). However this was not demonstrated through the findings; attributable perhaps to deficiencies in sampling and the high proportion of TLP1 male scientists, with their inherently lower acceptance of inter-professionalism as defined through earlier observations, skewing the outcomes.

With limited evidence of inter-scale relationships to suggest that teachers positive to *ECM* are also open to IPW/L, this may indicate that, whilst in principle teachers are mindful of their wider remit of social, emotional and spiritual education, illustrated through 52% citing a desire '*to see children succeed, not just academically*', thus agreeing with *ECM*'s principles, in practice they are more resistant to its ideals. Resistance may thus be perhaps not symptomatic of the doctrine itself, but consequential of its imposed nature. Weary of acting as "a juggler" of governmental expectations (Stronach et al. 2002), teachers are renowned to resist authority they perceive to be attacking their professional philosophies, undervaluing their role, and placing doubt and uncertainty in their work (Jeffrey & Woods 1998).

5.3.4 Summary of issues arising

From these interpretations the following conclusions may therefore be drawn:

- Greatest strength of teacher identity, dominated by a tendency to subject-dominance, reticence towards *ECM* and closure to IPW/L, is exemplified by the experienced male scientists. This may be explained by the enduring need for scientists to defend their subject and through its typically deductive nature being in tension with the more subjective nature of *ECM*. These more experienced males are typically the most influential within schools
- TLP is an important influencing factor. Beginning teachers (TLP1) grasp subject knowledge whilst more experienced embrace the didactical and pedagogical aspects as they build upon their practical classroom expertise. Conversely to expectations, TLP1&2 do not appear more receptive of inter-professionalism.

- Importance of holding a pastoral role is evident, typically indicating a below-average identity score, more positive attitudes to *ECM* and greater openness to IPW/L. Such inference, corroborated by the qualitative data, may be attributable to their increased awareness, by nature of their responsibilities, of *ECM* principles.

5.3.5 Implications of the findings for the future of the *ECM* agenda and recommendations

The findings highlight the intricacy of perceptions, indicating no single 'professional' stance, this varying with gender, biographies and experiences. However teachers' inherent resistance to change, only a minority (7.5%) perceiving a likely shift in teacher identity, also their strength of identity and limited openness to both *ECM* and inter-professional working/learning, beheld especially by the more influential teacher groups, has significant implications for the assimilation of inter-professionalism into education.

History has demonstrated that depending upon how teacher identity is challenged will determine whether they adopt a "rational [or] non-rational" response to reform (Day et al 2006b:146). Threatened by risks to their identity, individuals adopt strategies to protect themselves. As epitomised within the research findings, through such remarks that the agenda having not been addressed by their school, educationalists typically use 'knowledge lack', nonchalance and evasion as defensive barriers (eg. Connolly & Clandinin 1999; Nias 1989). Furthermore, tensions generated through working between accountability mechanisms: achieving grades for the school and including *ECM* into daily-work to fulfil *Ofsted* and societal requirements, act as this barrier, enabling prevarication.

This section of the report therefore seeks to consider, with reference to the research findings and issues arising from them, if, within the current clime, from a teacher perspective, inter-professionalism can hope to become reality.

For effective inter-professionalism and a necessary evolved teacher identity, socialisation will need to take place across the wider Children's Workforce; a new wider CoP with shared artefacts and language (Wenger 2000; Lave & Wenger 1991). Thus the method through which these new CoPs develop has significant implications

for *ECM*. Abhorrent of government-impositions (eg. Fullan 2004), enforced through their strength of identity teachers will typically resist enforced membership to meet organisational goals (eg. Veenswijk & Chisalita 2007), risking the rhetoric's success. Natural emergence (eg. Lave & Wenger 1991) through new socially-constructed communication promoting a common beneficial, independent outcome, the child, (the "boundary object") (eg. Swan, et al. 2002; Tushman & Scanlon 1981) may however enable practice-reconfiguration and the development of a joint "identity kit" (Gee 1991).

However, with SIT positing the importance of social-group membership in identity development, the researcher postulates that increased intra-professional interactions within this period of conflict will work to strengthen occupational closure. Thus the strength of teacher identity, typically poor perceptions of *ECM* and limited openness to inter-professional working/learning recognised through the research, combined with the limited empirical work on how CoPs operate within such politico-relationships (Contu & Wilmott 2003; Young 2001) and notions that tools of CoPs are developed over generations (eg. Warmington et al. 2004), will make inter-professionalism a time-consuming reality. Furthermore, educationalists are characteristically poor at operating as CoPs, even within their own profession (eg. Hodkinson & Hodkinson 2004b), segregated, as corroborated by this research, by their differing subject expertise.

As such, with *ECM* requiring not just nomenclatural changes, as asserted by some respondents/participants, but a fundamental transformation to the very fabric of the professionals' *selves* (eg. Geijsel & Meijers 2005), this research asserts that teachers are emotionally unreceptive of this doctrine. Inter-group socialisation and "boundary crossing" (Engestrom 1999,a,b) is not their perceived priority.

Synonymous with the constructs of contact theory (Pettigrew 1971; Allport 1954, in Brown et al. 1986), the findings emphasise how successful integration will require careful and supportive management ensuring equality, power-sharing and non-hierarchical structures (Stapleton 1998; Henneman et al. 1995) to break down the barriers of professional stereotypes, reduce hostilities and sustain positive identities (Day et al. 2006b).

With such structural change undoubtedly inciting illogical emotions (eg. Brown et al. 1986), the management of these must be prioritised, so they do not act as a barrier (eg. Bate 2004; Goleman 2000). Positive emotions stimulate resilience (Day et al 2006b; Fredrickson 2004, 2001) enabling individuals to take account of how other professionals view their roles and to bring these together through a common purpose. Thus, whilst criticised by some for initiating only role insecurity (eg. Funnell 1995), supported through joint interactions and cross-professional socialisation, as conjectured through SIT, new identities will develop enabling effective inter-professionalism (eg. Webb & Vulliamy 2001; Easen et al. 2000).

However, with attitudes well-ingrained, long-term sustained working-contact with other professions is necessary to secure any real impact (eg. Leaviss 2000); the importance of dispelling prejudices and negative attitudes towards others professionals early in training is thus paramount. Still developing their teacher identity (eg. Hobson & Malderez 2006; Kuzmic 1994), trainees should be presented with opportunities to experience the benefits of inter-professional working-practices (eg. Cameron & Lart 2003; Smith & Coates 2003). Whilst acknowledged through the Government's commitment to interprofessional-education for healthcare (eg. Barr 2000), there is no evidence of this crossing into initial teacher education. Furthermore, the development of a cross-professional 'Standards' framework whilst still embryonic (Christie & Menmuir 2005) and deemed unfavourable by the research participants, would provide a means of "transforming" students (Foucault 2001, 1994), regulating the construction of the professional self and identity (Nerland & Jensen 2007), thus engendering an ethos of inter-professionalism.

As such, in addition to the above, the following recommendations can be made to encourage inter-professionalism:

i. Explore links between the various stakeholders to ensure appropriate initial training of professionals:

    - at regional and local levels: for example trainees to work inter-professionally through development of HEI Departmental collaboration around common issues to facilitate necessary professional preparation (DfES 2003b);

- at national and regional levels: for example, professional bodies (eg. SCETT and UCET) to collaborate more extensively with equivalent professional bodies in health and social care.

ii. Facilitate wider integration and continuing professional training for practicing teachers to ensure co-ordination and collaboration

iii. Ensure appropriate management support is made available for the highest 'risk' groups, especially the experienced male scientists. Encouraging the support of this influential group should reduce professional resistance.

5.4 Conclusions about the Research Question

The research question sought to establish:

> *How do teachers perceive their professional identity (teacher identity) to be represented?*
>
> *What are the implications of this for the inter-professionalism imperative of the ECM agenda?*

Corroborating academic theory, the findings recognise how perceptions of teacher identity vary according to gender, subject and teaching life-phase. It has subsequently sought to consider how these influencing factors affect teachers' perceptions of, and willingness to adopt, the inter-professional working imperative.

The findings indicate that experienced, male scientists are potentially the most resistant, having the greatest strength of identity and being least receptive of the agenda and inter-professional working/learning. This is of significance since it is this group that typically have the greatest influence within schools (Sikes 1996).

Almost certainly however there are other mediating variables involved, variables outside the remit of this study. In retrospect, of considerable consequence is "social context" (Turner 1999) as aspect illustrated within Figures 2.4/5.1 but not directly explored within the research. School culture (eg. Connelly & Clandinin 1999), may explain the varied nature of the findings; accentuating between-school differences, its importance in both shaping teacher identity and their commitment/motivation (eg. Woods et al. 1997; Beijaard 1995; Hargreaves 1994), is critical.

Whilst the research reveals an ostensibly laissez-faire attitude towards *ECM*, it may be hypothesised that teachers' notably high strength of identity is a coping mechanism in response to this forced transfer into an unfamiliar socio-cultural context; a show of resistance or an inability to communicate their views (Hargreaves 1994). Although under-researched (Reio 2005), emotional reactions shape teachers willingness to take risks[17] (eg. Lasky 2005; Ponticell 2003); thus this coping mechanism may be emotionally and physically immobilising them to the new challenges (Van Veen 2003). Whilst possibly epitomising a 'crisis' period (Erikson 1968), policy imposition upon such strength of identity might, Siraj-Blatchford (1993) argues, threaten teacher resilience. With resistance ultimately risking emotional vulnerability (Zembylas 2003), endangering their professional commitment (Day et al. 2006a,b,c), this has significant implications for Leaders/Managers.

With the economic rationalist approach of *ECM* tending to neglect the individual professionals and cognisant that not all teachers will experience the reform similarly (eg. Watson 2006), if change efforts are to be successful, they must acknowledge the internal drivers of emotions and identity (Reio 2005). Concomitant with Lewin (1958)'s 'force field' this will require change interventionists to align with differing needs (eg. TLP, gender, social context) (Reio 2005:991). Through the notions of RCT (eg. Spears et al. 1997), being forced into a new group with no concern for emotions, may initiate antagonistic inter-professional relations. However, supported during this period of identity re-configuration as professional roles and tasks are re-defined, teachers may emerge 'rejuvenated'. Whilst possibly adopting Ibarra (1999)'s trial identities as their identities are re-created, such will engender, through corresponding changes in ideology, more positive perceptions of the notion of inter-professionalism. Failure to address this however, risks resultant conflict and failure.

Internal and external empowerment is thus fundamental in supporting the evolution to inter-professionalism within secondary education (Veenswijk & Chisalita 2007: 49), stimulated through a culture of strategic commitment to support new practices (Harker et al. 2004; Freeman et al. 2002). Whilst change undoubtedly instils vulnerability and instability, fearing loss of teacher identity if they step outside of

[17] The interactions of risk-taking, emotions and reform have noted how positive emotions encourage risk-taking, resilience and thus greater willingness to change (eg. Day et al 2006b; Fredrickson 2004, 2001)

their "institutional shelters" (Sennett 1998), through addressing these tensions teachers will be well-able to work effectively with other professionals, and through risk-taking, achieve professional development (Zembylas 2003). Whether teachers have the support and willingness to take these risks and whether they develop a hybrid identity or retain their teacher identity however remains to be seen. Finally, in the words of one respondent:

"*Dinosaurs are hard to change; they will never be extinct in education*!"

5.5 Limitations of the Research

Whilst cognisant of some limitations of the research from the onset, boundaries were met during its undertaking, as illustrated in Table 5.1.

Problem encountered in application	**Response**	**Limitation of response**
Limited return of the initial questionnaire 'mailing'	Administered multi-mode, the researcher taking the questionnaire to potential respondents	Multi-mode data collection may affect responses received (Saunders et al. 2007) Respondents may not have carefully considered their responses if: • feeling coerced • under temporal constraints • feeling their anonymity might be risked, the researcher being able, should she have wished, to attribute ownership to responses
Researcher's lack of familiarity with interview methods	Development of an *aide memoir*	Researcher may have missed things that an experienced interviewer would not
Participant temporal constraints preventing intended face-to-face interviewing	Adoption of telephone interviews	Data limited by: • a lack of non-verbal observations (Miller 1995; Frey 1983) • potentially less-detailed information provision (Thomas & Purdon 1994)
'Socially desirable' responses (Dillman 2000) within both questionnaire & interviews	Awareness of such responses	
Incongruent/juxtaposed responses due to unconscious rational *vs* irrational response characteristic of "Rational Emotive Behaviour" (Dryden 1995)	[may have been overcome through in-depth, open interviews but resource constraints would have prevented a sufficiency of data collection]	Data contamination (Saunders et al. 2007:359)

Table 5.1: Limitations of the methods as identified during the course of the research

Whilst the inherent strengths and weaknesses of methods used add to the risks associated with research, greatest significance lies within the sampling. With purposive, volunteer sampling acknowledged to risk an unrepresentative sample (Morse 1991), potential response-bias is exemplified through 37.5% of respondents being within TLP1 and 17.5% being female drama teachers.

Whilst intentionally small-scale, the small sample secured restricts the findings' validity/reliability and statistical application: small samples potentially yielding ambiguous non-significant results. Undoubtedly benefiting from being larger-scale, the research may also have profited from encompassing a geographically less-diverse area. Although often considered concurrently, Cheshire and Wirral LEAs are demographically and economically divergent. Furthermore, since the research provides a temporally-bound snap-shot within the participants' life, it must be acknowledged that this randomly selected sample-point lies within a lifetime of unknown roles, experiences, and ideologies; biographical influences not readily explicated (McAdams 1990).

Restrictions have also been incurred consequential of this being growth-area of research. With considerable significant literature in very recent publication there are indubitably new findings that would have provided a greater insight; however limits had to be drawn, both temporally and spatially.

Despite these limitations, such small-scale research, which typifies education, is valuable (eg. Burton et al. 2008), signifying fertile areas for future research. Therefore, with the researcher confident that the research aims have been met, this work can be framed as an 'emerging' study, with "naturalistic generalisability" (Stake 1978). Although insufficient to be validated, the findings have sufficiency to enable lesson-transfer (Gomm et al. 2000:238), contributing towards the fields of academic and practitioner understanding of teacher identity and its implications for inter-professionalism.

5.6 Personal reflections upon the Research

Personal enthusiasm for the research was realised through it providing an opportunity to explore a current, radical rhetoric with significant implications for a profession within which the researcher had procured membership.

Whilst at the onset this appeared almost 'virgin territory', throughout the eight months of its undertaking increasing numbers of articles and papers were published focussing upon this area. Initially frustrating, hindsight indicates the importance and relevance of its findings.

Additionally this provided the researcher with experience of a new avenue of research; previous academic experience having been of purely scientific deductive research. The temporal and cognitive implications of such undertaking became evident; the researcher had not anticipated people's ambivalence, thus considerable energies were required to secure even the limited support received.

In achieving the intended personal learning outcomes, the study serves to illustrate the challenges of working as an external researcher, with a profession that is both heavily time-restricted and reticent of change.

5.7 Opportunities for Further Research

The findings assert the varied representations and strength of teacher identity, perceptions of *ECM* and introversion to inter-professionalism. They identify sub-groups of teachers, relating to gender, experience and subject-area, who might act as bulwarks to change. There is however, a need to build upon these small-scale findings, extending this research to a larger sample size and additionally to deductively test these hypotheses to enable generalisation of the findings. Additionally consideration may be given to involving practitioners from across the other professions comprising the 'wider children's workforce'.

Whilst research inconclusivity may be attributable to the small sample, it may also be attributable to failure to address all influencing factors. With biographical detail acquired failing to consider the method/location of initial training which might influence identity development, of greatest significance is 'social context' (Turner 1999). Although the researcher made attempts to control this latter factor through selection of individuals from a limited geographical area, the diversity within these schools was later realised (Chapter 5.5). Whilst limited empirical research demonstrates contextual influences upon teacher identity, research from within healthcare (eg. Hind et al. 2003) emphasises how context strongly influence the way

that reforms are received, adopted and sustained. Exploration of this and its implications for teacher identity provides an important area for future research.

Additionally the interview findings indicated evidence of the emotional implications of the imperative, aspects that are often essentially hidden but that are a powerful aspect of change (Goleman 2000). Whilst at present the respondents are ostensibly adopting a laissez-faire attitude, the reasons for which are considered (Chapter 5.4), with Government intentions for inter-professionalism becoming increasingly important (eg. DCSF 2007a), before long the implications of this will become a reality in secondary schools, inciting teachers' increasing wariness of their professional security. As such this emotional aspect provides an important area for further exploration.

Finally, there may be value in controlling the 'experience' variable, the respondents' TLP, since research indicates that it is not until the second phase that teacher identity is exhibited (Sammons et al. 2007).

5.8 Conclusions

As identified in Chapter 1.3 the aim of this research was to contribute to the growing body of literature on teacher identity with the purpose of determining how this might impact upon the government imperative for inter-professionalism. Chapters 4 and 5, indicating similarities in the representation of teacher identity to that portrayed by Beijaard et al (2000), assert the strength of identity beheld by teachers, their generally poor perception of the *ECM* agenda and their reticence to inter-professional working/learning. Such will undoubtedly have significant implications for the success of the rhetoric, a reflection that must be acknowledged by Leaders/Managers in implementing the policy both locally and nationally.

5.9 Summary

This Chapter draws together the research findings described in Chapter 4, juxtaposing them with the conceptual framework outlined in Chapter 2.

Evaluation is made of the methodology and research strategy adopted, the research questions are answered and conclusions drawn regarding how teachers perceive their identity to be represented and the implications of the *ECM* agenda on it.

Finally consideration is made of the limitations and identification made of areas for future research.

> "*it is not necessarily the strongest of the species that survives, nor the most intelligent, but the one most responsive to change*"
>
> Charles Darwin (1802-1889)

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Appendices

Appendix 1

Questionnaire sent to schools in Cheshire & Wirral

Tel: (01244) 511xxx (work)
(01244) xxxxxx (home)

E-mail: k.black@chester.ac.uk

The professional identity of teachers

A request for your participation in a research study

I am currently researching the implications of multi-agency working & trans-professionalism for the professional identity of teachers. It is intended this research will contribute to further understanding of the implications of the *Every Child Matters* agenda for teachers & schools.

As a qualified Secondary teacher, with 6 years teaching experience in Pembrokeshire & then Cheshire, I appreciate the pressures & time constraints that you are under, however I would greatly appreciate your completing the attached questionnaire which is designed to determine teachers' perceptions of their professional identity & how they believe the *Every Child Matters* agenda will affect these. Completion of this questionnaire should take no more than 10 minutes of your time.

My research will be fully compliant with both the University & BERA Ethics guidelines; so for example, only my supervisor & I will have access to the raw questionnaire data. All completed questionnaires & their resultant data will remain strictly anonymous & all school & participants names will remain strictly confidential.

Upon the completion of the research, a summary of the research findings and its key implications will be made available to you.

If you have any questions or queries please do not hesitate to contact me by email at k.black@chester.ac.uk or on the 'phone numbers above.

Thank you in anticipation of your support.

Kate Black

QUESTIONNAIRE TO INVESTIGATE TEACHERS' PROFESSIONAL IDENTITY & THE *EVERY CHILD MATTERS* AGENDA

This questionnaire is designed to assess the attitudes of Secondary school teachers within Cheshire, the Marches & the Wirral towards the topic of professional identity/sense of 'self' and the impact of the *Every Child Matters* (*ECM*) agenda

For the purposes of this questionnaire, professional identity is defined as

> "*the relatively stable & enduring attributes, beliefs, values, motives & experiences in terms of which people define their careers & work roles*" (Ibarra 1991)

The questionnaire is separated into four sections & should take no more than **10 minutes** to complete. It aims to find out what **you** think.

1. General information
2. How your professional identity is represented
3. How important you think your identity as a teacher is and how satisfied you are with it
4. What affect the Every Child Matters agenda will have upon a teacher's professional identity
5. How important it is or will be, to work and learn with other professionals involved in the life of the child

All data will remain strictly anonymous & confidential

Please complete all questions in each section

If you should have any questions relating to this, please do not hesitate to contact me by email at k.black@chester.ac.uk or by phone on 01244 511xxx

Please return the completed questionnaire by email to k.black@chester.ac.uk by 21st December 2007

or by post to: Kate Black at: Faculty of Education & Children's Services, University of Chester, Parkgate Road, Chester CH1 4BJ

Section 1: General information

1a. Are you [1] Male ☐ [2] Female ☐

1b. For how many years have you taught? ☐ years

1c. Have you had any other career?

[1] Yes* ☐ [2] No ☐

*If *yes*, please indicate your other career area(s)

1d. What is your main subject area / responsibility within your present school?

1e. Do you have any other designated responsibilities within the school? (*please state what these are and for how long you have held them*)

Section 2: How your professional identity is represented

Researchers have suggested that teachers see their professional identity as having three elements:

1. subject matter expertise
2. didactical expertise
3. pedagogical expertise

For the purpose of this research these elements can be defined as:

- a *subject matter expert* is a teacher who bases his/her perception of the profession on subject knowledge & skills;
- a *didactical expert* is a teacher who bases his/her perception of the profession on knowledge & skills regarding the planning, execution & evaluation of teaching & learning processes;
- a *pedagogical expert* is a teacher who bases his/her perception of the profession on knowledge & skills to support students' social, emotional & moral development

2a. Please award a total of 100 points between these three elements according to how important you feel these are in your own professional identity/sense of 'self' (for example, 50 points to subject matter expertise, 30 points to didactical expertise & 20 points to pedagogical expertise)

	Points	
a subject matter expert		[1]
a didactical expert		[2]
a pedagogical expert		[3]
TOTAL	**100**	

2b. Please outline briefly why you have awarded these points in the way that you have

2c. Do you think that the points you have allocated to this will change in the next 5 years? (*Please tick*)

[1] Yes* ☐ [2] No ☐

**** if yes*, please explain briefly <u>how</u> & <u>why</u> you think they will change**

How will it change?

Why will it change?

2d. To what extent, on a scale of 1-5 do you think this three part division of professional identity is relevant to your experience of the ways teachers generally see their professional identity/sense of 'self'? (*please circle*)

1	2	3	4	5
Very relevant	**Relevant**	**Neutral**	**Not relevant**	**Not at all relevant**

2e. Please explain briefly why you think this is

Section 3: The importance of your identity as a teacher and how satisfied you are with it

This section of the questionnaire is designed to identify your sense of common identity with other teachers & the teaching profession.

3a. What were the main reasons for you choosing to become a teacher?

3b. Please complete <u>all</u> questions by placing a cross [X] in one box for each question to indicate how strongly you feel about the statements

	1	2	3	4	5
	Never	Seldom	Sometimes	Often	Very often
I am a person who considers teachers to be important					
I am a person who identifies with other teachers					
I am a person who feels strong ties with teachers & the teaching profession					
I am a person who is glad to be a teacher					
I am a person who sees myself as belonging to the teaching profession					
I am a person who makes excuses for being a teacher					
I am a person who tries to hide away from being a member of the teaching profession					
I am a person who feels held back by being a teacher					
I am a person who feels annoyed to admit to being a teacher					
I am a person who criticises other teachers / the teaching profession					

3c. To what extent, on a scale of 1-5 are you satisfied with your work? (*please circle*)

1	2	3	4	5
Very satisfied	Satisfied	Neutral	Not satisfied	Not at all satisfied

Section 4: What affect the Every Child Matters agenda will have upon a teacher's professional identity?

This section of the questionnaire is designed to explore what affect you think the *Every Child Matters* agenda will have upon teachers

4a. Please complete <u>all</u> of the questions, responding to the questions by placing a cross [X] in one box for each question to indicate the extent to which you agree or disagree with each statement.

	1	2	3	4	5
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Teaching is very important within my life					
Teachers have a greater understanding of other professionals as a result of the *ECM* agenda					
Teachers are being forced to adopt different behaviours as a result of the *ECM* agenda					
Teachers are developing an increased skills base as a result of the *ECM* agenda					
The professional identity of teachers <u>has</u> changed as a result of the *ECM* agenda					
The professional identity of teachers <u>will</u> change further as a result of the *ECM* agenda					
ECM has given teachers a greater sense of professional empowerment					
The changes brought about by *ECM* will have a long-lasting effect on teachers' professional identities					
The changes brought about by *ECM* will have a long-lasting effect on your school					
ECM is increasing the pressures placed on teachers					
Overall, *ECM* will benefit children & young people					

4b. Has your understanding of being a professional teacher been changed as a result of experiences emerging from the *ECM* agenda? Please explain

Section 5: How important it is or it will be, to work and learn with other professionals involved in the life of the child

This section of the questionnaire is designed to explore how important you think that working & learning with other professionals involved in the life and well-being of the child (for example, health workers, social workers) is or will be

	1	2	3	4	5
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Interprofessional working					
Different professional groups have stereotypical views of each other					
The different professional groups are not always co-operative with one another					
Collaborative working would be a positive learning experience for all the professional groups					
I would enjoy the opportunity to work other professionals					
Interprofessional learning					
Learning with other professionals will help overcome the stereotypes that are held about the other professions					
My skills in communicating with other professionals would be improved through learning with them					
Collaborative learning would be a positive experience for all the professional groups					
Learning with other professionals will improve the service for the children & their families					

Section 6:

Would you like to expand on any of your responses above or do you have any further comments?

Thank you very much for your help in completing this questionnaire

Please return it by email to k.black@chester.ac.uk or by post to: Kate Black at Faculty of Education & Children's Services, University of Chester, Parkgate Road, Chester CH1 4BJ by Friday 21st December 2007

Appendix 2

Information & Consent forms for participants

Participant information sheet

The perceived implications of teachers' professional identity for the Every Child Matters Agenda

You are being invited to take part in a research study. It is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully; please do not hesitate to ask me if there is anything that is not clear or if you would like more information.

Thank you

What is the purpose of the study?
The aim of the study is to investigate the perceived implications of the *Every Child Matters* agenda upon the professional identity of secondary school teachers.
The study comprises two elements:

1. questionnaire distributed to over 100 secondary schools in Cheshire & the Wirral to establish how teachers perceive their professional identity to be represented & how they perceive it will be affected by the requirements of the *Every Child Matters* agenda
2. interviews within a case-study school in Chester to provide further clarification & deeper understanding of how teachers perceive the *Every Child Matters* agenda will impact upon their professional identity

It is for this latter element, the interviews, that you are being asked to participate.

The research will culminate in a written report, which will be submitted in partial fulfilment for the degree of Master of Business Administration (MBA) at the University of Chester. It is hoped that the findings from the study will be used to inform & gain further understanding of the implications of this government rhetoric for both teachers & other professional groups.

Why have I been asked to participate?
You have been chosen to participate in the interviews because you work as a secondary school teacher within the selected case-study school in Chester.

Do I have to take part?
If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

With your permission the meeting will be audio taped. You will not be identifiable in the final report.

What are the possible disadvantages and risks of taking part?
There are no disadvantages or risks foreseen in taking part in the study.

Will my taking part in the study be kept confidential?
All information which is collected about you during the course of the research will be kept strictly confidential so that only the researcher carrying out the research will have access to such information.
Individuals who participate will not be identified in any subsequent report or publication.

Consent form

Title of Project: ***The perceived implications of teachers' professional identity for the Every Child Matters Agenda***

Name of Researcher: Kate Black

		Please initial box
1.	I confirm that I have read and understood the participant information sheet for the above study and have had the opportunity to ask questions.	☐
2.	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	☐
3.	I agree to take part in the above study.	☐

_____	_____	_____
Name of Participant	Date	Signature

_____	_____	_____
Researcher	Date	Signature

Appendix 3

Semi-structured Interview
Aide memoir

INTERVIEWERS FRAMEWORK TO INVESTIGATE TEACHERS' PROFESSIONAL IDENTITY & THE *EVERY CHILD MATTERS* AGENDA

This interview is designed to assess the attitudes of Secondary school teachers within your school towards the theme of professional identity and the impact of the *Every Child Matters* (*ECM*) agenda

The purpose of the interview is to explore what **you** think.

It will explore 3 main aspects:

1. How you perceive your professional identity to be represented;
2. What is your knowledge, understanding & experience of the *Every Child Matters* agenda;
3. What affect you perceive the *Every Child Matters* agenda will have upon your professional identity

Interview should take no more than 30 minutes

Interview should take no more than 30 minutes

Anonymity is assured both in the data collection & analysis (consent forms etc.)

Reference code: ……..

Date: …… **Time: ……..**

General information

1. Gender

[1] Male ☐ [2] Female ☐

2. How long taught?

☐ years

3. Any other previous career?

[1] Yes* ☐ [2] No ☐

4. Main subject area

……..

5. Other designated responsibilities - & for how long?

……..

How do you perceive your professional identity?

1. Why did you become a teacher & how important do you feel teaching is in your life?
2. It has been suggested that a teacher's professional identity can be represented by 3 aspects (subject, didactic & pedagogic expertise) (provide explanation card). What do you think about this?
3. How satisfied are you with teaching as your career? – are you pleased to be a teacher?

***ECM* agenda & its implications**

Although the government has suggested teachers will not be directly involved with the ECM agenda, in practice this is not thought to be the case, since there are a number of requirements upon them consequential of it.

4. What experiences do you have of *ECM* in practice in your school & what are your thoughts on this?
5. Do you think that your understanding of being a professional teacher has been changed as a result of experiences emerging from *ECM*?
6. It is generally accepted that *ECM* will have an impact upon professional identity – How do you feel about this?/What do you think about this?
7. It has been suggested that stereotypical views held by different professional groups will hinder interprofessional working. What are your thoughts on this?
8. Integral to *ECM* is the notion of workforce remodelling (paraprofessionals to ensure inclusion within the classroom) – what are your thoughts & experiences of this?
9. *ECM* requires teachers to "extend their professionalism" – not to do more, but to know more about other professionals & to open up access to them

    What are you doing to extend your professionalism? – has this been of benefit? – how & why?

    What is your school doing to encourage teachers to extend their professionalism? – has this been beneficial – how & why?

10. What are your thoughts & feelings about teachers being required to extend their professionalism & adopting integrated & multi-disciplinary working practices?
11. What are your thoughts on IPL?
12. What are your thought on the proposal for common occupational standards for all professionals working with children? (*or are they protective of their own profession/professional identity?*)
13. Overall, how do you feel about the *ECM* agenda & its implications for you as a teacher?

Appendix 4

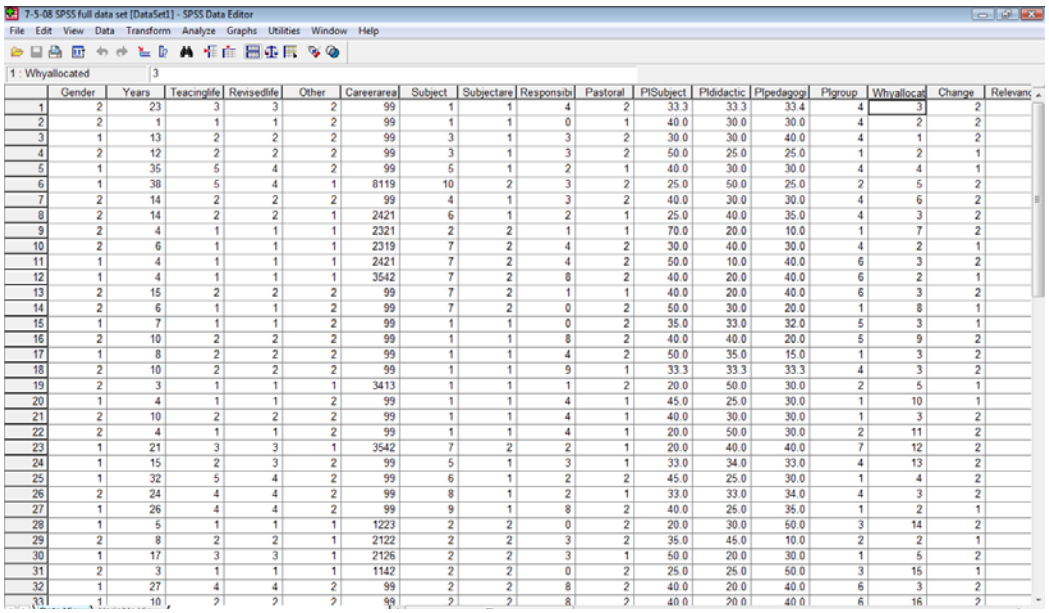
Post-coding scheme information

Post-coding information

To facilitate analysis of the multiple-response questionnaire data within SPSS v14.0, the following coding scheme was developed & employed. This was used in conjunction with the pre-coding (Table 3.1) & re-coding (Table 3.5) undertaken

Question		Response	Code
1b	Number of years taught	Phase 1 (TLP1) Phase 2 (TLP2) Phase 3 (TLP3) Phase 4 (TLP4) Phase 5 (TLP5)	1 2 3 4 5
1d	Subject-area taught	Arts Sciences	1 2
1e	Other designated (pastoral) duties	Yes (Y) No (N)	1 2
	all	Missing data	99

Extract from the coding scheme used to classify responses:



Appendix 5

Internal Reliability calculations using Cronbach Alpha

Reliability Statistics for the PI scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.761	0.761	10

Inter-Item Correlation Matrix

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Q1	1.000	0.578	0.567	0.356	0.533	0.000	0.079	0.209	0.101	0.307
Q2	0.578	1.000	0.765	0.249	0.522	0.246	0.240	0.194	0.118	0.014
Q3	0.567	0.765	1.000	0.516	0.563	0.268	0.076	0.155	0.140	0.111
Q4	0.356	0.249	0.516	1.000	0.500	0.141	-0.082	0.063	0.166	0.115
Q5	0.533	0.522	0.563	0.500	1.000	-0.096	-0.070	-0.034	-0.076	0.042
Q6	0.000	0.246	0.268	0.141	-0.096	1.000	0.359	0.112	0.524	0.026
Q7	0.079	0.240	0.076	-0.082	-0.070	0.359	1.000	0.634	0.570	0.217
Q8	0.209	0.194	0.155	0.063	-0.034	0.112	0.634	1.000	0.270	0.294
Q9	0.101	0.118	0.140	0.166	-0.076	0.524	0.570	0.270	1.000	0.264
Q10	0.307	0.014	0.111	0.115	0.042	0.026	0.217	0.294	0.264	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	24.58	9.943	0.580	0.525	0.722
Q2	25.08	8.738	0.629	0.717	0.706
Q3	25.20	8.164	0.684	0.725	0.694
Q4	24.78	10.281	0.415	0.465	0.742
Q5	24.80	10.421	0.419	0.543	0.742
Q6	27.93	10.584	0.272	0.415	0.763
Q7	28.15	10.951	0.364	0.658	0.749
Q8	27.83	10.353	0.323	0.506	0.756
Q9	28.25	11.218	0.377	0.523	0.751
Q10	27.35	11.003	0.233	0.245	0.765

Reliability Statistics for the ECM scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.758	0.758	11

Inter-Item Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11
Q1	1.000	-0.084	-0.127	-0.210	0.074	-0.061	0.005	0.109	0.012	0.044	0.015
Q2	-0.084	1.000	0.064	0.496	0.524	0.288	0.665	0.357	0.568	-0.073	0.463
Q3	-0.127	0.064	1.000	0.185	0.103	0.165	-0.052	0.066	0.110	-0.339	-0.022
Q4	-0.210	0.496	0.185	1.000	0.726	0.381	0.366	0.384	0.558	0.007	0.397
Q5	0.074	0.524	0.103	0.726	1.000	0.491	0.648	0.506	0.637	-0.086	0.354
Q6	-0.061	0.288	0.165	0.381	0.491	1.000	0.304	0.394	0.451	-0.271	0.178
Q7	0.005	0.665	-0.052	0.366	0.648	0.304	1.000	0.505	0.539	-0.020	0.341
Q8	0.109	0.357	0.066	0.384	0.506	0.394	0.505	1.000	0.657	-0.221	0.437
Q9	0.012	0.568	0.110	0.558	0.637	0.451	0.539	0.657	1.000	-0.332	0.480
Q10	0.044	-0.073	-0.339	0.007	-0.086	-0.271	-0.020	-0.221	-0.332	1.000	0.039
Q11	0.015	0.463	-0.022	0.397	0.354	0.178	0.341	0.437	0.480	0.039	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	29.00	19.421	-0.035	0.225	0.725
Q2	27.72	15.524	0.614	0.593	0.712
Q3	27.95	19.418	0.025	0.184	0.727
Q4	27.77	15.024	0.612	0.704	0.710
Q5	27.59	14.985	0.778	0.770	0.692
Q6	27.87	17.273	0.423	0.328	0.739
Q7	27.21	15.957	0.634	0.677	0.714
Q8	27.79	15.378	0.601	0.531	0.713
Q9	27.97	14.657	0.703	0.676	0.697
Q10	27.21	20.641	-0.195	0.346	0.712
Q11	28.33	16.702	0.511	0.364	0.729

Reliability Statistics for IPW/L scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.744	0.737	8

Inter-Item Correlation Matrix

	1	2	3	4	5	6	7	8
Q1	1.000	0.303	0.155	-0.218	-0.368	-0.013	-0.357	-0.188
Q2	0.303	1.000	0.013	-0.182	0.164	0.173	-0.078	0.139
Q3	0.155	0.013	1.000	0.445	0.331	0.290	0.389	0.424
Q4	-0.218	-0.182	0.445	1.000	0.534	0.510	0.554	0.496
Q5	-0.368	0.164	0.331	0.534	1.000	0.510	0.688	0.739
Q6	-0.013	0.173	0.290	0.510	0.510	1.000	0.450	0.621
Q7	-0.357	-0.078	0.389	0.554	0.688	0.450	1.000	0.742
Q8	-0.188	0.139	0.424	0.496	0.739	0.621	0.742	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	15.84	9.917	-0.130	0.406	0.808
Q2	16.00	8.944	0.118	0.315	0.773
Q3	18.03	7.638	0.485	0.357	0.709
Q4	17.97	7.638	0.522	0.519	0.703
Q5	17.89	7.710	0.659	0.681	0.688
Q6	17.65	6.623	0.629	0.484	0.674
Q7	17.89	7.321	0.587	0.660	0.689
Q8	17.78	6.341	0.750	0.722	0.645

Appendix 6

Excerpts from data collected through questionnaire & interviews

6a Excerpts from questionnaire to investigate teachers' professional identity & the Every Child Matters Agenda

These excerpts are compiled from a number of different questionnaires; they are not the opinions of one respondent

Section 2: How your professional identity is represented

2a. Please award a total of 100 points between these three elements according to how important you feel these are in your own professional identity/sense of 'self'

	Points	
a subject matter expert	33	[1]
a didactical expert	33	[2]
a pedagogical expert	34	[3]
TOTAL	**100**	

2b. Please outline briefly why you have awarded these points in the way that you have

Excellent subject knowledge is essential in order to aid planning and delivery of lessons which engage all students whilst enabling them to learn in their own way. In order to do this we must constantly evaluate our own performance in the classroom, share good practice and ensure that it is used for the advancement of students as individuals

Teachers are our most valuable resource but our responsibility to educate is not just about the delivery of content, but about education in its widest sense.

I believe all are of equal importance

Section 3: The importance of your identity as a teacher and how satisfied you are with it

3a. What were the main reasons for you choosing to become a teacher?

To help children
Fun to work with
Enjoyed my subject

3b. Please complete <u>all</u> questions by placing a cross [x] in one box for each question to indicate how strongly you feel about the statements

	1	2	3	4	5
	Never	Seldom	Sometimes	Often	Very often
I am a person who considers teachers to be important					x
I am a person who identifies with other teachers				x	
I am a person who feels strong ties with teachers & the teaching profession				x	
I am a person who is glad to be a teacher				x	
I am a person who sees myself as belonging to the teaching profession				x	
I am a person who makes excuses for being a teacher		x			
I am a person who tries to hide away from being a member of the teaching profession	x				
I am a person who feels held back by being a teacher	x				
I am a person who feels annoyed to admit to being a teacher	x				
I am a person who criticises other teachers / the teaching profession				x	

Section 4: What affect the Every Child Matters agenda will have upon a teacher's professional identity?

4a. Please complete <u>all</u> of the questions, responding to the questions by placing a cross [X] in one box for each question to indicate the extent to which you agree or disagree with each statement.

	1	2	3	4	5
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Teaching is very important within my life	X				
Teachers have a greater understanding of other professionals as a result of the *ECM* agenda			X		
Teachers are being forced to adopt different behaviours as a result of the *ECM* agenda			X		
Teachers are developing an increased skills base as a result of the *ECM* agenda			X		
The professional identity of teachers <u>has</u> changed as a result of the *ECM* agenda			X		
The professional identity of teachers <u>will</u> change further as a result of the *ECM* agenda			X		
ECM has given teachers a greater sense of professional empowerment			x		
The changes brought about by *ECM* will have a long-lasting effect on teachers' professional identities			X		
The changes brought about by *ECM* will have a long-lasting effect on your school		X			
ECM is increasing the pressures placed on teachers		x			
Overall, *ECM* will benefit children & young people			X		

Section 5: How important it is or it will be, to work and learn with other professionals involved in the life of the child

	1	2	3	4	5
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Interprofessional working					
Different professional groups have stereotypical views of each other		X			
The different professional groups are not always co-operative with one another		X			
Collaborative working would be a positive learning experience for all the professional groups		X			
I would enjoy the opportunity to work other professionals		X			
Interprofessional learning					
Learning with other professionals will help overcome the stereotypes that are held about the other professions		X			
My skills in communicating with other professionals would be improved through learning with them			X		
Collaborative learning would be a positive experience for all the professional groups		X			
Learning with other professionals will improve the service for the children & their families		X			

Section 6: Would you like to expand on any of your responses above or do you have any further comments?

I believe we will find that ECM becomes just another element for consideration by teachers. It will not radically change our working lives. The strands of ECM are generally a wish list which we all strive for and always have done

6b Excerpts From Interviewer's framework to investigate Teachers' professional identity & the Every Child Matters Agenda

These excerpts are compiled from different interviews; they are not the opinions of one participant

1. Why did you become a teacher & how important do you feel teaching is in your life?

   "*I wanted to contribute to t he betterment & progression of society … what idle dreams*"

2. It has been suggested that a teacher's professional identity can be represented by 3 aspects (subject, didactic & pedagogic expertise). What do you think about this?

   "*I am perhaps old fashioned but I have attempted to maintain the concept of knowledge as being of paramount importance. This must however be supported through preparation & assessment*"

   "*You need to be able to transmit the knowledge that you have effectively, otherwise that knowledge is worthless*"

   Other terminologies offered: "*reflective practitioner*", "*commitment*", "*bond with pupils*"

3. How satisfied are you with teaching as your career? – are you pleased to be a teacher?

   "*Teaching is my life ... it is what I have always wanted & what I enjoy*"

   "*I enjoy working with young people; it is good to see them learning, having fun & motivated*"

4. What experiences do you have of *ECM* in practice in your school & what are your thoughts on this?

   "*We have experienced little to date, other than a Staff Development session on it … but I suppose it has made me more aware … & if it will stop children being abused etc. then it has to be of value … just not sure how it will really work in practice*"

5. Do you think that your understanding of being a professional teacher has been changed as a result of experiences emerging from *ECM*?
6. It is generally accepted that *ECM* will have an impact upon professional identity – How do you feel about this?/What do you think about this?

   "*Knowledge is becoming irrelevant … 'dumbing down' will continue & devalue the worth of examinations*"

"*I don't think that it has changed my view on the profession's status*"

"*It makes you more aware of the impact teaching has on the 'whole' child*"

8. Integral to *ECM* is the notion of workforce remodelling (paraprofessionals to ensure inclusion within the classroom) – what are your thoughts & experiences of this?

   "*I have always worked with classroom assistants when needed; I can't see why this will be any different ... It is just another pressure on me, another person to worry about to plan for & to interfere with what I am trying to do*"

   "*What do <u>they</u> know about what I do, what we do as teachers? I am not sure why they would want to anyway*"

10. What are your thoughts & feelings about teachers being required to extend their professionalism & adopting integrated & multi-disciplinary working practices?

    "*I am sure that it will be valuable, but I am not sure that we are all in a position to do this … it is OK for those with pastoral responsibilities, but we do not see the children enough, unless they are a problem*"

13. Overall, how do you feel about the *ECM* agenda & its implications for you as a teacher?

    "*I cannot wait to retire. " am thoroughly disillusioned with the way that the profession has deteriorated*"

    "*Political expediency is causing the system to fall into disarray, it is collapsing because the Government thinks they know what we do; they just ride rough-shod over those who know the job: its problems and enjoyment*".

Appendix 7

Statistical analysis reports

7a Independent samples T-test Analysis

H_0: There is no significant difference in Strength of identity between ….

(i) … the genders

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Score for Brown et al (1986) identity	Male	20	45.6	2.48	0.55
	Female	20	44.55	3.19	0.71

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid. Interval of the Difference	
									Lower	Upper
Score for Brown et al (1986) identity	Equal variances assumed	2.28	0.14	1.16	38.00	0.25	1.05	0.90	-0.78	2.88
	Equal variances not assumed			1.16	35.83	0.25	1.05	0.90	-0.78	2.88

The mean professional identity score for males (M=45.60, SD=2.48) does not differ statistically to that calculated for females (M=44.55, SD=3.19) (t=-0.58, *df* =38, 2-tailed p = 0.57, E^2=0.03, 3% shared variance); thus H_0 is accepted

(ii) … the subject areas

	Subject area	N	Mean	Std. Deviation	Std. Error Mean
Score for Brown et al (1986) identity	Arts	20	44.85	2.60	0.58
	Sciences	20	45.30	3.16	0.71

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid.Interval of the Difference	
									Lower	Upper
Score for Brown et al (1986) identity	Equal variances assumed	0.23	0.63	-0.49	38.00	0.63	-0.45	0.92	-2.30	1.40
	Equal variances not assumed			-0.49	36.63	0.63	-0.45	0.92	-2.31	1.41

Within subject area the mean score for Arts teachers (M=44.85, SD=2.60) & scientists (M=45.30, SD=3.16) does not differ statistically significantly (t=-0.49, *df*=38, 2 tailed p=0.63, E^2=0.008, 0.8% shared variance); thus H_0 is accepted.

(iii) … those with/without previous career experience

Group Statistics

	Previous career?	N	Mean	Std. Deviation	Std. Error Mean
Brown et al (1986) identity	Yes	14	44.71	2.920	0.780
	No	26	45.27	2.878	0.564

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score for Brown et al (1986) identity	Equal variances assumed	0.006	0.938	-0.579	38	0.566	-0.555	0.959	-2.496	1.386
	Equal variances not assumed			-0.576	26.402	0.569	-0.555	0.963	-2.533	1.423

There is no statistical difference between those teachers with previous career experience (M=44.71, SD=2.92) & those without (M=45.27, SD=2.88), t=-0.58, *df*=38, 2 tailed p=0.57, E^2=0.009, 0.9% shared variance; thus H_0 is accepted

(iv) … those with/without additional pastoral responsibilities

	Pastoral role?	N	Mean	Std. Deviation	Std. Error Mean
Score for Brown et al (1986) identity	Yes	14	44.71	2.494	0.667
	No	26	45.27	3.080	0.604

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score for Brown et al (1986) identity	Equal variances assumed	0.186	0.669	-0.579	38	0.566	-0.555	0.959	-2.496	1.386
	Equal variances not assumed			-0.617	31.922	0.542	-0.555	0.899	-2.387	1.277

There is no significant difference between those with/without a pastoral role (t=0.58, *df*=38, 2-tailed p=0.57, E2=0.008, 0.8% variance explained by pastoral role); thus H_0 is accepted

H_0: There is no significant difference in the ECM scale between ….

(i) … the genders

	Gender	N	Mean	Std. Deviation	Std. Error Mean
ECM scale	Male	20	22.15	5.14	1.15
	Female	20	23.35	4.20	0.94

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
ECM scale	Equal variances assumed	0.53	0.47	-0.81	38.00	0.42	-1.20	1.48	-4.20	1.80
	Equal variances not assumed			-0.81	36.53	0.42	-1.20	1.48	-4.21	1.81

Independent-sample t-test conducted to compare the scores showed that there was no significant difference in the ECM scores for the males (M=22.15, SD=5.14) & females (M=23.35, SD=4.20), t=-0.81, *df*=38, 2 tailed p=0.42); thus H_0 is accepted

(ii) … the subject areas

	Subject area	N	Mean	Std. Deviation	Std. Error Mean
ECM scale	Arts	20	23.45	5.50	1.23
	Sciences	20	22.05	3.68	0.82

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Differ	95% Confid.Interval of the Difference	
									Lower	Upper
ECM scale	Equal variances assumed	4.81	0.03	0.95	38.00	0.35	1.40	1.48	-1.60	4.40
	Equal variances not assumed			0.95	33.16	0.35	1.40	1.48	-1.61	4.41

Independent-sample t-test conducted to compare the scores showed that there was no significant difference in the ECM scores for the Arts (M=23.45, SD=5.50) & the Sciences (M=22.05, SD=3.68), t=0.95, *df*=38, 2 tailed p=0.35); thus H_0 is accepted

(iii) … those with/without previous career experience

	Previous career?	N	Mean	Std. Deviation	Std. Error Mean
ECM scale	Yes	14.00	22.57	3.46	0.92
	No	26.00	22.85	5.27	1.03

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid. Interval of the Difference	
									Lower	Upper
ECM scale	Equal variances assumed	4.28	0.05	-0.18	38.00	0.86	-0.27	1.57	-3.45	2.90
	Equal variances not assumed			-0.20	36.33	0.84	-0.27	1.39	-3.09	2.54

Independent-sample t-test conducted to compare the scores showed that there was no significant difference between those with previous career experience (M=22.57, SD=3.46) & those without (M=22.85, SD=5.27), t=-0.20, *df*=36.33, 2 tailed p=0.84); thus H_0 is accepted

(iv) … those with/without additional pastoral responsibilities

	Pastoral role?	N	Mean	Std. Deviation	Std. Error Mean
ECM scale	Yes	14	23.07	4.411	1.179
	No	26	22.58	4.884	0.958

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid. Interval of Difference	
									Lower	Upper
ECM scale	Equal variances assumed	0.064	0.802	0.316	38	0.754	0.495	1.567	-2.678	3.667
	Equal variances not assumed			0.326	29.210	0.747	0.495	1.519	-2.611	3.600

There is no significant difference between the mean ECM index scores for those holding as pastoral role (M=23.07, SD=4.41) & those not (M=22.58, SD=4.88): t=0.32, *df*=38, 2-tailed p=0.75, E2=0.003, 0.3% variance explained by pastoral role; thus H_0 is accepted

H_0: There is no significant difference in openness to IPW/L between ….

(i) … the genders

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Total score for IPL&W	Male	20	12.5	2.52357	0.56429
	Female	20	10.55	2.87411	0.64267

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid. Interval of the Difference	
									Lower	Upper
Total score for IPL&W	Equal variances assumed	0.3571	0.5537	2.28	38	0.0283	1.95	0.8552	0.2186	3.6814
	Equal variances not assumed			2.28	37.375	0.0284	1.95	0.8552	0.2177	3.6823

There is a significant difference between the mean IPW/L index scores for the females (M=10.55, SD=2.87), (t=2.28, *df*=38, 2-tailed r=0.02) to that of the males (M=12.50, SD=2.52); thus H_0 is rejected

(ii) … the subject areas

	Overall subject area	N	Mean	Std. Deviation	Std. Error Mean
Total score for IPL&W	Arts	20	11.25	2.94	0.66
	Sciences	20	11.80	2.80	0.63

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid.Interval of the Difference	
									Lower	Upper
Total score for IPL&W	Equal variances assumed	0.01	0.92	-0.61	38.00	0.55	-0.55	0.91	-2.39	1.29
	Equal variances not assumed			-0.61	37.92	0.55	-0.55	0.91	-2.39	1.29

There is no significant difference between the mean IPW/L index scores for the Arts (M=11.25, SD=2.94) & the sciences (M=11.80, SD=2.80), t=-0.61, *df*=38, 2-tailed r=0.55; thus H_0 is accepted

(iii) … those with/without previous career experience

Total score for IPL&W	Previous career?	N	Mean	Std. Deviation	Std. Error Mean
	Yes	14	12.429	2.9013	0.7754
	No	26	11.038	2.7493	0.5392

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid. Interval of the Difference	
									Lower	Upper
Total score for IPL&W	Equal variances assumed	0.2034	0.6546	1.4965	38	0.1428	1.390	0.928	-0.4904	3.2706
	Equal variances not assumed			1.4719	25.50	0.1533	1.390	0.944	-0.553	3.3333

There is no significant difference between the mean IPW/L index scores for those with previous career experience (M=12.43, SD=2.90) & those without (M=11.04, SD=2.75), t=1.49, *df*=38, 2-tailed r=0.14; thus H_0 is accepted

(iv) … those with/without additional pastoral responsibilities

	Pastoral role	N	Mean	Std. Deviation	Std. Error Mean
Total score IPL&W	Yes	14	11.14	3.085	0.824
	No	26	11.73	2.750	0.539

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confid. Interval of the Difference	
									Lower	Upper
Total score for IPL&W	Equal variances assumed	0.008	0.930	-0.618	38	0.540	-0.588	0.951	-2.513	1.338
	Equal variances not assumed			-0.597	24.2	0.556	-0.588	0.985	-2.620	1.445

There is no significant difference between the mean IPW/L index scores for those holding as pastoral role (M=11.14, SD=3.09) & those not (M=11.73, SD=2.75): t=-0.62, *df*=38, 2-tailed p=0.54, E^2=0.009, 0.9% variance explained by pastoral role; thus H_0 is accepted

7b Analysis of Variance (ANOVA)

H_0: There is no significant difference in professional identity representation between ….

(i) … the teaching life phases

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
0-7 years	15	3.13	1.767	0.456	2.15	4.11	1	6
8-15 years	13	3.54	1.761	0.489	2.47	4.60	1	6
16-23 years	4	4.00	2.449	1.225	0.10	7.90	1	7
24-30 years	4	3.25	2.217	1.109	-0.28	6.78	1	6
>31 years	4	2.75	1.500	0.750	0.36	5.14	1	4
Total	40	3.33	1.789	0.283	2.75	3.90	1	7

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.311	4	1.078	0.313	0.867
Within Groups	120.464	35	3.442		
Total	124.775	39			

Post Hoc Tests: Tukey HSD

Teaching life phase	Teaching life phase	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper
0-7 years	8-15 years	-0.405	0.703	0.978	-2.43	1.62
	16-23 years	-0.867	1.044	0.919	-3.87	2.13
	24-30 years	-0.117	1.044	1.000	-3.12	2.88
	>31 years	0.383	1.044	0.996	-2.62	3.38
8-15 years	0-7 years	0.405	0.703	0.978	-1.62	2.43
	16-23 years	-0.462	1.061	0.992	-3.51	2.59
	24-30 years	0.288	1.061	0.999	-2.76	3.34
	>31 years	0.788	1.061	0.945	-2.26	3.84
16-23 years	0-7 years	0.867	1.044	0.919	-2.13	3.87
	8-15 years	0.462	1.061	0.992	-2.59	3.51
	24-30 years	0.750	1.312	0.978	-3.02	4.52
	>31 years	1.250	1.312	0.874	-2.52	5.02
24-30 years	0-7 years	0.117	1.044	1.000	-2.88	3.12
	8-15 years	-0.288	1.061	0.999	-3.34	2.76
	16-23 years	-0.750	1.312	0.978	-4.52	3.02
	>31 years	0.500	1.312	0.995	-3.27	4.27
0over 31 years	0-7 years	-0.383	1.044	0.996	-3.38	2.62
	8-15 years	-0.788	1.061	0.945	-3.84	2.26
	16-23 years	-1.250	1.312	0.874	-5.02	2.52
	24-30 years	-0.500	1.312	0.995	-4.27	3.27

Tukey HSD

Teaching life phase	N	Subset for alpha = .05
		1
>31 years	4	2.75
0-7 years	15	3.13
24-30 years	4	3.25
8-15 years	13	3.54
16-23 years	4	4.00
Sig.		0.791

ANOVA suggests that there is no significant difference in professional identity representation between the subject areas [$F_{4.3,1201}$=0.31, p=0.87, E^2=0.003, 3% shared variance]; thus H_0 is accepted

(ii) … those with/without additional pastoral responsibilities

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower	Upper		
Yes	14	3.21	1.929	0.515	2.10	4.33	1	7
No	26	3.38	1.745	0.342	2.68	4.09	1	6
Total	40	3.33	1.789	0.283	2.75	3.90	1	7

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.264	1	0.264	0.081	0.778
Within Groups	124.511	38	3.277		
Total	124.775	39			

ANOVA indicates that there is no significant difference in professional identity representation between those holding pastoral roles & those not [$F_{0.2,124}$=0.081, p=0.77, E^2=0.002, 0.2% shared variance]; thus H_0 is accepted.

(ii) … the subject areas

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower	Upper		
Arts	13	2.69	1.653	0.458	1.69	3.69	1	5
Sciences	17	3.88	2.027	0.492	2.84	4.92	1	7
Total	30	3.37	1.938	0.354	2.64	4.09	1	7

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.433	1	10.433	2.965	0.096
Within Groups	98.534	28	3.519		
Total	108.967	29			

ANOVA indicates that there is a significant difference, at the p<0.10 (10%) level in professional identity representation between the subject areas [$F_{10,98}$=2.96, p=0.09, E^2=0.10, 10% shared variance]; thus H_0 is rejected.

(iii) … those with/without previous career experience

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower	Upper		
Yes	14	3.29	1.978	0.529	2.14	4.43	1	7
No	26	3.35	1.719	0.337	2.65	4.04	1	6
Total	40	3.33	1.789	0.283	2.75	3.90	1	7

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.033	1	0.033	0.010	0.920
Within Groups	124.742	38	3.283		
Total	124.775	39			

ANOVA indicates that there is no significant difference in professional identity representation & their having had previous career experience [$F_{0.3,124}$=0.01, p=0.92, E^2=0.0002]; thus H_0 is accepted.

H_0: There is no significant difference in PI scale between ….

(i) … the teaching life phases

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower	Upper		
0-7 years	15.00	44.47	3.23	0.83	42.68	46.25	38.00	48.00
8-15 years	13.00	44.77	2.77	0.77	43.09	46.45	41.00	50.00
16-23 years	4.00	46.50	1.91	0.96	43.45	49.55	44.00	48.00
24-30 years	4.00	45.50	3.00	1.50	40.73	50.27	42.00	48.00
0ver 31 yrs	4.00	46.50	2.65	1.32	42.29	50.71	43.00	49.00
Total	40.00	45.08	2.87	0.45	44.16	45.99	38.00	50.00

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.73	4.00	5.93	0.70	0.60
Within Groups	297.04	35.00	8.49		
Total	320.78	39.00			

Post Hoc Tests - not required as no significant difference

For Teaching life phase ANOVA revealed that whilst the assumptions of homogeneity of variance was not violated (Levene statistic = 0.46) there was no statistically significant difference between the mean scores across the five phases ($F_{23,297}$=0.70, p=0.60); thus H_0 is accepted.

H_0: There is no significant difference in perceptions of ECM between ….

(i) … the teaching life phases

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower	Upper		
0-7 years	15.00	20.47	3.52	0.91	18.52	22.42	14.00	27.00
8-15 years	13.00	24.08	4.50	1.25	21.36	26.80	16.00	33.00
16-23 years	4.00	25.00	6.38	3.19	14.85	35.15	19.00	31.00
24-30 years	4.00	26.50	4.93	2.47	18.65	34.35	21.00	32.00
>31 years	4.00	21.00	4.08	2.04	14.50	27.50	15.00	24.00
Total	40.00	22.75	4.67	0.74	21.26	24.24	14.00	33.00

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	189.84	4.00	47.46	2.51	0.06
Within Groups	661.66	35.00	18.90		
Total	851.50	39.00			

Post Hoc Tests not required as value exceed 0.05

For Teaching life phase ANOVA revealed that whilst the assumptions of homogeneity of variance was not violated (Levene statistic = 1.32) there was no statistically significant difference between the mean scores across the five phases ($F_{189,661}$=2.51, p=0.06); thus H_0 is rejected at 6%. Post hoc tests do not however reveal any significantly different Teaching Life Phases.

H_0: There is no significant difference in openness to IPW/L between ….

(i) … the professional life phases

	N	Mean	Std. Deviation	Std. Error	95% Confid. Interval for Mean		Minimum	Maximum
					Lower	Upper		
0-7 years	15.00	11.53	2.80	0.72	9.98	13.08	6.00	15.00
8-15 years	13.00	11.69	2.43	0.67	10.22	13.16	7.00	15.00
16-23 years	4.00	11.00	4.08	2.04	4.50	17.50	6.00	16.00
24-30 years	4.00	11.75	3.30	1.65	6.49	17.01	8.00	16.00
>31 years	4.00	11.25	4.11	2.06	4.71	17.79	6.00	15.00
Total	40.00	11.53	2.85	0.45	10.61	12.44	6.00	16.00

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.97	4.00	0.49	0.05	0.99
Within Groups	314.00	35.00	8.97		
Total	315.98	39.00			

For Teaching life phase ANOVA revealed that whilst the assumptions of homogeneity of variance was not violated (Levene statistic = 0.50) there was no statistically significant difference between the mean scores across the five phases ($F_{1,314}$=0.05, p=0.99); thus H_0 is accepted & post hoc tests not required.

7c Multiple Regression Analysis

H_0: There is no significant relationship between the Strength professional identity & the model of gender, life phase, subject taught & pastoral role

Correlations

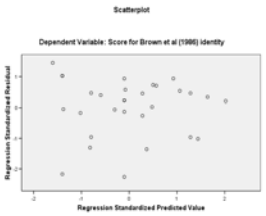
		Score for PI	Gender	Pastoral role	Teaching life phase	Subject
Pearson Correlation	Score for PI	1.000	-0.222	-0.009	0.265	0.026
	Gender	-0.222	1.000	-0.238	-0.009	-0.050
	Pastoral role	-0.009	-0.238	1.000	-0.130	0.238
	TLP	0.265	-0.009	-0.130	1.000	-0.044
	Subject	0.026	-0.050	0.238	-0.044	1.000
Sig. (1-tailed)	Score for PI	.	0.119	0.482	0.078	0.445
	Gender	0.119	.	0.103	0.481	0.397
	Pastoral role	0.482	0.103	.	0.246	0.103
	TLP	0.078	0.481	0.246	.	0.408
	Subject	0.445	0.397	0.103	0.408	.

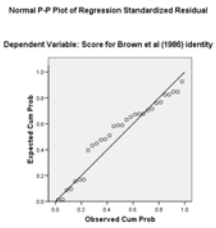
R	R Square	Adjusted R Square	Std. Error of the Estimate
.348	0.121	-0.020	2.816

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	46.104	3.232		14.265	0.000		
Gender	-1.257	1.069	-0.227	-1.176	0.251	0.942	1.062
Pastoral role	-0.216	1.164	-0.037	-0.185	0.854	0.877	1.140
TLP	0.563	0.410	0.260	1.374	0.182	0.981	1.019
Subject	0.195	1.068	0.035	0.182	0.857	0.943	1.060

Dimension	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	Gender	Pastoral role	Teaching life phase	Subject
1	4.560	1.000	0.00	0.00	0.00	0.01	0.00
2	0.235	4.405	0.00	0.01	0.02	0.86	0.03
3	0.122	6.113	0.00	0.57	0.10	0.01	0.08
4	0.064	8.448	0.01	0.00	0.39	0.00	0.80
5	0.019	15.427	0.99	0.41	0.48	0.12	0.09

	Min.	Max.	Mean	Std. Dev.
Predicted Value	43.92	47.42	45.47	0.969
Std. Predicted Value	-1.600	2.019	0.000	1.000
Standard Error of Predicted Value	0.824	1.599	1.135	0.186
Adjusted Predicted Value	42.93	47.59	45.43	1.111
Residual	-6.367	4.085	0.000	2.614
Std. Residual	-2.261	1.451	0.000	0.928
Stud. Residual	-2.397	1.616	0.007	1.015
Deleted Residual	-7.169	5.066	0.042	3.128
Stud. Deleted Residual	-2.676	1.673	-0.014	1.066
Mahal. Distance	1.517	8.386	3.867	1.629





Using the model of gender, life phase, subject taught & pastoral role, indicates that these variables account for 12% of the variance in PI score. Of these, professional life phase makes the greatest contribution (β=0.26).

H_0: There is no significant relationship between the ECM* scale *& the model of gender, life phase, subject taught & pastoral role

Correlations

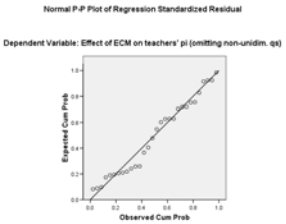
		ECM scale	Gender	Pastoral role	Teaching life phase	Subject
Pearson Correlation	ECM scale	1.000	0.011	-0.188	0.347	-0.152
	Gender	0.011	1.000	-0.238	-0.009	-0.050
	Pastoral role	-0.188	-0.238	1.000	-0.130	0.238
	TLP	0.347	-0.009	-0.130	1.000	-0.044
	Subject	-0.152	-0.050	0.238	-0.044	1.000
Sig. (1-tailed)	ECM scale	.	0.477	0.160	0.030	0.211
	Gender	0.477	.	0.103	0.481	0.397
	Pastoral role	0.160	0.103	.	0.246	0.103
	TLP	0.030	0.481	0.246	.	0.408
	Subject	0.211	0.397	0.103	0.408	.

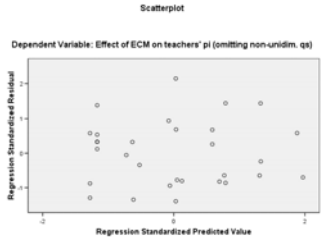
R	R Square	Adjusted R Square	Std. Error of the Estimate
.391	0.153	0.017	4.804

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	24.018	5.514		4.356	0.000		
Gender	-0.206	1.824	-0.021	-0.113	0.911	0.942	1.062
Pastoral role	-1.261	1.986	-0.125	-0.635	0.531	0.877	1.140
TLP	1.225	0.699	0.326	1.752	0.092	0.981	1.019
Subject	-1.048	1.822	-0.109	-0.575	0.570	0.943	1.060

Dimension	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	Gender	Pastoral role	TLP	Subject
1	4.560	1.000	0.00	0.00	0.00	0.01	0.00
2	0.235	4.405	0.00	0.01	0.02	0.86	0.03
3	0.122	6.113	0.00	0.57	0.10	0.01	0.08
4	0.064	8.448	0.01	0.00	0.39	0.00	0.80
5	0.019	15.427	0.99	0.41	0.48	0.12	0.09

	Min.	Max.	Mean	Std. Dev.
Predicted Value	20.21	26.37	22.63	1.894
Std. Predicted Value	-1.277	1.971	0.000	1.000
Standard Error of Predicted Value	1.406	2.728	1.936	0.317
Adjusted Predicted Value	19.61	27.84	22.70	2.149
Residual	-6.692	10.308	0.000	4.460
Std. Residual	-1.393	2.146	0.000	0.928
Stud. Residual	-1.492	2.298	-0.006	1.016
Deleted Residual	-7.676	11.824	-0.068	5.350
Stud. Deleted Residual	-1.532	2.535	0.002	1.046
Mahal. Distance	1.517	8.386	3.867	1.629





Using the model of gender, life phase, subject taught & pastoral role results indicates that these variables account for 15.3% of the variance in ECM score. Of these, teaching life phase makes the greatest contribution (β=0.32) & is significant at the 10% level

H_0: There is no significant relationship between the openness to IPW/L & the model of gender, life phase, subject taught & pastoral role

Correlations

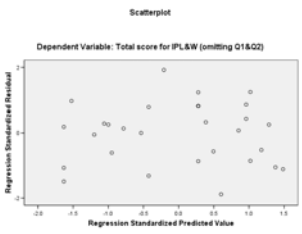
		Score for IPL&W	Gender	Pastoral role	Teaching life phase	Subject
Pearson Correlation	Total score for IPL&W	1.000	-0.454	-0.056	0.099	-0.157
	Gender	-0.454	1.000	-0.238	-0.009	-0.050
	Pastoral role	-0.056	-0.238	1.000	-0.130	0.238
	Teaching life phase	0.099	-0.009	-0.130	1.000	-0.044
	Subject	-0.157	-0.050	0.238	-0.044	1.000
Sig. (1-tailed)	Total score for IPL&W	.	0.006	0.385	0.302	0.204
	Gender	0.006	.	0.103	0.481	0.397
	Pastoral role	0.385	0.103	.	0.246	0.103
	Teaching life phase	0.302	0.481	0.246	.	0.408
	Subject	0.204	0.397	0.103	0.408	.

R	R Square	Adjusted R Square	Std. Error of the Estimate
.511	0.261	0.142	2.385

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	17.323	2.737		6.328	0.000		
Gender	-2.512	0.905	-0.492	-2.774	0.010	0.942	1.062
Pastoral role	-0.690	0.986	-0.128	-0.699	0.491	0.877	1.140
TLP	0.142	0.347	0.071	0.410	0.686	0.981	1.019
Subject	-0.754	0.905	-0.148	-0.833	0.413	0.943	1.060

Dimension	Eigenvalue	Condition Index	Variance Proportions				
			Constant	Gender	Pastoral role	Teaching life phase	Subject
1	4.560	1.000	0.00	0.00	0.00	0.01	0.00
2	0.235	4.405	0.00	0.01	0.02	0.86	0.03
3	0.122	6.113	0.00	0.57	0.10	0.01	0.08
4	0.064	8.448	0.01	0.00	0.39	0.00	0.80
5	0.019	15.427	0.99	0.41	0.48	0.12	0.09

	Min.	Max.	Mean	Std. Dev.
Predicted Value	9.55	13.65	11.70	1.315
Std. Predicted Value	-1.632	1.484	0.000	1.000
Standard Error of Predicted Value	0.698	1.354	0.961	0.157
Adjusted Predicted Value	9.36	14.23	11.71	1.408
Residual	-4.492	4.576	0.000	2.214
Std. Residual	-1.884	1.919	0.000	0.928
Stud. Residual	-2.060	2.149	-0.003	1.015
Deleted Residual	-5.373	5.738	-0.014	2.649
Stud. Deleted Residual	-2.215	2.331	-0.005	1.046
Mahal. Distance	1.517	8.386	3.867	1.629



The results of the multiple regression analysis using the model that gender, life phase, subject taught & pastoral role indicates that these variables account for 26% of the variance in PI score. Of these, gender makes the greatest contribution (beta=0.49. p=0.01)

7d Bivariate Correlation Analysis

H_0: There is no significant relationship between the PI score & …

(i) … *ECM score*

		PI score	ECM score
PI score	Pearson Correlation	1.00	0.14
	Sig. (2-tailed)		0.38
ECM score	Pearson Correlation	0.14	1.00
	Sig. (2-tailed)	0.38	
Coefficient of Determination		0.02	

Indicates a low strength positive, but not significant relationship (r=0.14, p=0.38, 2% shared variance), suggesting that teachers with a strength of identity are less positive about ECM; however H_0 is accepted

(ii) … IPW/L scale

		PI score	IPL&W score
PI score	Pearson Correlation	1.00	-0.02
	Sig. (2-tailed)		0.91
IPL&W score	Pearson Correlation	-0.02	1.00
	Sig. (2-tailed)	0.91	
Coefficient of Determination		0.000	

Indicates essentially no relationship (r=-0.02, p=0.91) between the variables; thus H_0 is accepted

H_0: There is no significant relationship between the perception of ECM & ….

(i) … IPW/L scale

		IPL&W score	ECM score
IPL&W score	Pearson Correlation	1.00	0.23
	Sig. (2-tailed)		0.16
ECM score	Pearson Correlation	0.23	1.00
	Sig. (2-tailed)	0.16	
Coefficient of Determination		0.05	

Indicates a low strength positive, but not significant relationship (r=0.23, p=0.16, 5% shared variance), suggesting that teachers that were more positive towards ECM are also more open to IPW/L; however H_0 is accepted at the 5% level.

Summary Inter-scale correlations for each calculated scale by sub-group

	PI scale		ECM scale		IPW/L scale	
	r	**p**	**r**	**p**	**r**	**p**
PI scale						
Gender						
Male	-	-	0.04	0.86	-0.19	0.43
Female	-	-	0.30	0.19	-0.02	0.92
Subject area						
Arts	-	-	0.13	0.6	0.32	0.18
Sciences	-	-	0.21	0.3	-0.32	0.17
Life Phase						
1	-	-	0.29	0.29	-0.16	0.56
2	-	-	0.33	0.27	0.48	0.09
3	-	-	-0.93	0.07	-0.43	0.57
4	-	-	-0.83	0.17	-0.89	0.11
5	-	-	0.77	0.23	0.54	0.46
Previous career						
Yes	-	-	-0.08	0.78	-0.16	0.59
No	-	-	0.22	0.20	0.09	0.65
ECM scale						
Gender						
Male	0.04	0.86	-	-	0.40	0.08
Female	0.30	0.19	-	-	0.19	0.43
Subject area						
Arts	0.13	0.6	-	-	0.17	0.48
Sciences	0.21	0.3	-	-	0.38	0.09
Life Phase						
1	0.29	0.29	-	-	0.13	0.63
2	0.33	0.27	-	-	0.08	0.79
3	-0.93	0.07	-	-	0.06	0.93
4	-0.83	0.17	-	-	0.71	0.29
5	0.77	0.23	-	-	0.93	0.07
Previous career						
Yes	-0.08	0.78	-	-	0.44	0.11
No	0.22	0.20	-	-	0.18	0.39
IPW/L scale						
Gender						
Male	-0.19	0.43	0.40	0.08	-	-
Female	-0.02	0.92	0.19	0.43	-	-
Subject area						
Arts	0.32	0.18	0.17	0.48	-	-
Sciences	-0.32	0.17	0.38	0.09	-	-
Life Phase						
1	-0.16	0.56	0.13	0.63	-	-
2	0.48	0.09	0.08	0.79	-	-
3	-0.43	0.57	0.06	0.93	-	-
4	-0.89	0.11	0.71	0.29	-	-
5	0.54	0.46	0.93	0.07	-	-
Previous career						
Yes	-0.16	0.59	0.44	0.11	-	-
No	0.09	0.65	0.18	0.39	-	-

7e Multivariate Analysis of Variance (MANOVA)

Are males more open to ECM & IPL/W than females?

	Minimum	Maximum	Mean	Std. Dev.
Predicted Value	1.16	2.06	1.5	0.206
Std. Predicted Value	-1.63	2.73	6.83E-16	1
Standard Error of Predicted Value	0.08	0.23	0.124674	0.037
Adjusted Predicted Value	1.19	2.08	1.504871	0.215
Residual	-0.71	0.74	-1.3E-16	0.462
Std. Residual	-1.49	1.56	-2.8E-16	0.974
Stud. Residual	-1.62	1.61	-0.00484	1.013
Deleted Residual	-0.84	0.79	-0.00487	0.501
Stud. Deleted Residual	-1.66	1.65	-0.00451	1.022
Mahal. Distance	0.03	7.96	1.95	1.812

Box's Test of Equality of Covariance Matrices(a)	
Box's M	1.663
F	0.523
df1	3
df2	259,920.000
Sig.	0.667

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Wilks' Lambda	0.029	629.171	2.000	37.000	0.000	0.971	1,258.342	1.000
Gender	Wilks' Lambda	0.834	3.695	2.000	37.000	0.034	0.166	7.390	0.643

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Square	Noncent. Parameter	Observed Power
Corrected Model	IPW&L	38.025(b)	1	38.025	5.199	0.028	0.120	5.199	0.603
	ECM	14.400(c)	1	14.400	0.654	0.424	0.017	0.654	0.124
Intercept	IPW&L	5,313.025	1	5,313.025	726.37	0.000	0.950	726.371	1.000
	ECM	20,702.50	1	20,702.50	939.78	0.000	0.961	939.786	1.000
Gender	IPW&L	38.025	1	38.025	5.199	0.028	0.120	5.199	0.603
	ECM	14.400	1	14.400	0.654	0.424	0.017	0.654	0.124
Error	IPW&L	277.950	38	7.314					
	ECM	837.100	38	22.029					
Total	IPW&L	5,629.000	40						
	ECM	21,554.00	40						
Corrected Total	IPW&L	315.975	39						
	ECM	851.500	39						

Dependent Variable	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower	Upper
IPW&L score	Male	12.500	0.605	11.276	13.724
	Female	10.550	0.605	9.326	11.774
ECM score	Male	22.150	1.049	20.025	24.275
	Female	23.350	1.049	21.225	25.475

Using the 2 DVs of ECM & IPL/W with the IV of gender: Preliminary assumption testing was conducted to test for normality, linearity, univariate & multivariate outliers, homogenity of variance-covariance matrices & multicollinearity, with no violations noted. There was a statistically significant difference between males & females on the combined dependent variables [F(14,38)=5.19, p=0.02; Wilks Lambda=0.03, partial eta squared=0.12]. When the results for the DV were considered separately the only difference to reach statistical significance using a Boneroni adjusted alpha level of 0.025, was IPL/W [F(14,38)=5.199, p=0.02, partial eta squared=0.12]. An inspection of the mean scores indicated that male reported slightly higher IPL/W scores (M=12.5) than females (M=10.55). Therefore males are less open to inter-professionalism than females

Appendix 8

Extract from Simplified Theme Analysis to analyse qualitative data

Excerpts from Simplified Theme Analysis to analyse qualitative data

To facilitate analysis of the qualitative data, using the three-stage procedure outlined in Figure 3.8 based upon the work of Miles & Huberman (1994) & Cresswell (1994), the following categories/themes were identified.

Question 2b

Why did you allocate the points in the way that you did?

Initial Categories/Themes	**Code ±**
Personal ethos of teaching	1
Subject knowledge is the most important as supports the other 2 elements	2
They are all intrinsically linked	3
All are important in supporting the others	4
Gut feeling	5
Illustrates the range of responsibilities I hold	6
They are all independent of each other	7
Reflects personal expertise	8
Subject is my love - others I learned	9
Subject & didacticism are intrinsically linked	10
Linked to time allocation per week	11
I believe I learn through reflection	12
Didacticism & pedagogy are linked	13
Packaging is more important than the content	14
If you show you care, the child will learn better	15
Pedagogy is key the others can be learned	16
Subject knowledge & pedagogy are key to teaching success	17
If I understand my subject I feel more secure in teaching it	18
If you have a good rapport with pupils they learn better	19
Importance of education in its "wider" sense	20

Categories/Themes identified	**Code**
Personal ethos	1
Equal importance	2
Intrinsic interdependency of elements	3
Traditional knowledge	4
'Security' (of personal knowledge)	5
Reflects my personal ethos	6
Knowledge supports the other elements	7
Influence of other school responsibilities	8
Delivery not knowledge is vital for learning	9
Area of expertise	10
Self-evaluation	11
Education in its 'widest' sense	12
Social & moral well-being of individuals	13
Rapport with pupils	14
Subject commitment	15

± The numbers denote the different colours used to categorise

Question 3a

What were the main reasons for you choosing to become a teacher?

Initial Categories/Themes identified	Code
To perpetuate the learning process	1
To impart my knowledge	2
Enjoy working with children	3
To make a difference	4
To use my subject	5
Convenient career	6
Variation in the job	7
Secure/adequate pay & job security	8
Vocation	9
To guide young people	10
By default	11
Peer pressure	12
To help improve the status of my subject	13
Challenge of each day being different	14
To be a part of children's learning	15
Personal experiences as a pupil	16

Categories/Themes identified	Code
Love of their subject	1
Vocation	2
To help children and their future: to 'make a difference'	3
Inspirational role model	4
Enjoyment of children's company	5
To help improve my subject's status in schools	6
By 'default'/peer pressure	7
To perpetuate the learning process	8
Career that fitted my personal life/needs	9
Love of the 'unknown' – no day is the same	10
Satisfaction	11